

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural
Resources Department

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

Incident ID	nAUTOfAB000420
District RP	1RP-258
Facility ID	fAB00000000273
Application ID	pENV00001RP258

Release Notification

Responsible Party

Responsible Party: Chevron USA Inc.	OGRID: Not Applicable
Contact Name: Armando Martinez	Contact Telephone: 575.586.7639
Contact email: amarti@chevron.com	Incident # (assigned by OCD) nAUTOfAB000420
Contact mailing address:	

Location of Release Source

Latitude 32.643018

Longitude -103.301158

(NAD 83 in decimal degrees to 5 decimal places)

Site Name NM F State	Site Type: former tank battery and reserve pit
Date Release Discovered: Unknown, Pit discovered sometime after 1986	API# (if applicable) Not Applicable

Unit Letter	Section	Township	Range	County
I	24	19S	36E	Lea

Surface Owner: ☒ State ☐ Federal ☐ Tribal ☐ Private (Name: _____)

Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

<input checked="" type="checkbox"/> Crude Oil	Volume Released (bbls) Unknown	Volume Recovered (bbls) Unknown
<input type="checkbox"/> Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

Unknown. The tank battery and reserve pit are visible in aerial photographs dated February 1949, July 1983, and June 1986. Sometime after 1986, an earthen emergency reserve pit was located approximately 175 feet north of the tank battery. The former reserve pit was subsequently unearthed during construction of a production facility immediately south of the pit by the Amerada-Hess Corporation.

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State of New Mexico
Oil Conservation Division

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Was this a major release as defined by 19.15.29.7(A) NMAC? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release? Unknown release amount. Considered major release.
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Unknown.	

Initial Response

The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury

<input checked="" type="checkbox"/> The source of the release has been stopped. <input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> been undertaken, explain why: 	
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
Printed Name: <u>Armando Martinez</u> Title: <u>Operations Lead</u>	
Signature: <u></u> Date: <u>5/10/2023</u>	
email: <u>amarti@chevron.com</u> Telephone: <u>575.586.7639</u>	
<u>OCD Only</u> Received by: _____ Date: _____	

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Site Assessment/Characterization

This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release?	<u>62</u> (ft bgs)
Did this release impact groundwater or surface water?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas not on an exploration, development, production, or storage site?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

Characterization Report Checklist: *Each of the following items must be included in the report.*

- ☒ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- ☒ Field data
- ☒ Data table of soil contaminant concentration data
- ☒ Depth to water determination
- ☒ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
- ☐ Boring or excavation logs- **Not Applicable**
- ☒ Photographs including date and GIS information
- ☒ Topographic/Aerial maps
- ☒ Laboratory data including chain of custody

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

State of New Mexico
Oil Conservation Division

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Printed Name: Armando Martinez Title: Operations LeadSignature:  Date: 5/10/2023email: amarti@chevron.com Telephone: 575.586.7639**OCD Only**

Received by: _____ Date: _____



Armando Martinez
Operations Lead, Portfolio Operations Central

May 5, 2023

New Mexico Oil Conservation Division – District I
1625 N. French Drive
Hobbs, New Mexico 88240

**Re: Former New Mexico “F” State Tank Battery
2022 Annual Groundwater Monitoring Report
Case No. 1RP-258
Lea County, New Mexico**

To whom it may concern:

Chevron Environmental Management Company (CEMC) submits herein the *2022 Annual Groundwater Monitoring Report* for the Former New Mexico “F” State Tank Battery (Site). The Site is located approximately three miles northwest of Monument, in Section 24 - Township 19 South - Range 36 East, Lea County, New Mexico. The Report was prepared by Arcadis U.S., Inc. (Arcadis), on behalf of CEMC to document on-going groundwater monitoring and remediation activities throughout 2022 at the Site.

If you have any questions regarding this submittal, please contact Scott Foord of Arcadis at (713) 953-4853 or me at (505) 690 5408.

Respectfully,

A handwritten signature in blue ink, appearing to read "Armando Martinez".

Armando Martinez
Operations Lead Central

Encl. Former New Mexico “F” State Tank Battery - 2022 Annual Groundwater Monitoring Report

Armando Martinez
Operations Lead Central
Portfolio Operations - Central
354 State Highway 38, Questa, NM 87556-0469
Tel 575 586 7639 Mobile 505 690 5408 Fax 575 586 0811
amarti@chevron.com



REVIEWED

By Mike Buchanan at 11:33 am, Aug 02, 2023

Chevron Environmental Management Company

2022 Annual Groundwater Monitoring Report

**Former New Mexico “F” State Tank Battery
Section 24, Township 19 South, Range 36 East
Lea County, New Mexico
Case No. 1RP-258**

May 5, 2023

Review of the 2022 Annual Groundwater Report for F State Tank Battery submitted on behalf of Chevron:

Content Satisfactory

1. Request to reduce LNAPL Recovery and Gauging is granted for one (1) year to allow conditions at the site to equilibrate.
2. Monitoring wells: MW3, MW-4, MW-5, MW-7, MW-8, MW-9R, WW-1, and WW-2 may be reduced from sampling events.
3. Continue all other monitoring activities for the site
4. Submit the 2023 Annual Groundwater monitoring report by April 1, 2024.

2022 Annual Groundwater Monitoring Report

2022 Annual Groundwater Monitoring Report

**Former New Mexico "F" State Tank Battery
Section 24, Township 19 South, Range 36 East
Lea County, New Mexico
Case No. 1RP-258**

May 5, 2023

Prepared By:

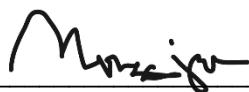
Arcadis U.S., Inc.
10205 Westheimer Road, Suite 800
Houston
Texas 77042
Phone: 713 953 4800
Fax: 713 977 4620

Prepared For:

Armando Martinez
Operations Lead Central
Chevron Environmental Management Company
P.O. Box 469
Questa, New Mexico 87556

Our Ref:

30049835



Morgan Jordan
Project Manager



Scott Foord, PG
Program Manager

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2022 Annual Groundwater Monitoring Report

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2022 Annual Groundwater Monitoring Report

1 Introduction

Arcadis U.S., Inc. (Arcadis) has prepared this report for Chevron Environmental Management Company (CEMC), which summarizes 2022 groundwater monitoring activities at the Former New Mexico "F" State Tank Battery (Site).

The Site is located on Lea County Road 41 (Maddox Road), approximately three miles northwest of Monument, in the northeast quarter (NE/4) of the southeast quarter (SE/4), Section 24, Township 19 South, Range 36 East, Lea County, New Mexico. The Site's coordinates are latitude 32.643018 and longitude -103.301158.

A Site Location Map is presented as **Figure 1**. A Site Details Map is presented as **Figure 2**. Additional Site background information is presented in **Appendix A**.

A Proposed Groundwater Monitoring and Light Non-aqueous Phase Liquid (LNAPL) Operation and Maintenance (O&M) Reduction Workplan (Reduction Workplan) was submitted to the New Mexico Oil Conservation Division (NMOCD) in July 2020 which included:

- One semi-annual monitoring event (full Site) consisting of sampling and gauging of all Site wells (seven monitoring wells and four recovery wells).
- A second semi-annual sampling event consisting of sampling of monitoring wells MW-6, RW-2, and RW-3 only.
- Two additional groundwater gauging and sampling events conducted during the first and third quarters of a calendar year consisting of sampling of sentry well MW-6 to ensure the dissolved-phase plume is not migrating southwest towards the off-site water wells (WW-1 and WW-2).

Site monitoring wells with chemicals of concern (COC) concentrations reported below New Mexico Water Quality Control Commission (NMWQCC) exceedance standards for two consecutive years or longer were not gauged or sampled during the second semi-annual monitoring event except for sentry well MW-6. Additionally, the frequency of LNAPL gauging and hand-bailing activities were reduced from bi-weekly to quarterly gauging only (no hand-bailing) for one year (through August 2021) to allow LNAPL conditions at the Site to equilibrate so that a more practical/efficient LNAPL recovery method could be evaluated.

Quarterly gauging only (no hand-bailing) was initiated in July 2020 and conducted through August 2021. Monthly LNAPL gauging and hand-bailing was re-initiated in September 2021 and conducted through May 2022. In May 2022, LNAPL skimmer pumps were re-installed in recovery wells (RW-1 and RW-4) and bi-weekly operation and maintenance (O&M) activities were re-initiated and are currently in operation.

The Reduction Workplan submitted to NMOCD in July 2020 is presented in **Appendix B**. Activities at the Site have been conducted in accordance with the Workplan since its submittal.

2 Groundwater Monitoring Results

The Site is currently monitored with a network of seven monitoring wells and four recovery wells. Arcadis performed semi-annual groundwater sampling events on June 8-9, 2022, and November 18, 2022. Sentry well MW-6 was additionally sampled on March 8, 2022, and August 15, 2022. Field monitoring methodologies are detailed in **Appendix C**.

2022 Annual Groundwater Monitoring Report

2.1 Groundwater Gauging Data

Site-wide gauging was conducted during the first and second semi-annual groundwater sampling events and the two additional sampling events at sentry well MW-6.

Groundwater and LNAPL measurements collected during the quarterly monitoring events conducted in 2022 indicated:

- Groundwater elevations ranged from:
 - 3,637.82 feet above mean sea level (ft AMSL) (MW-7) to 3,640.93 ft AMSL (RW-1) during the March 2022 event,
 - 3,637.69 ft AMSL (MW-7) to 3,641.15 ft AMSL (RW-1) during the June 2022 event,
 - 3,637.38 ft AMSL (MW-7) to 3,640.69 ft AMSL (RW-1) during the August 2022 event, and
 - 3,637.24 ft AMSL (MW-7) to 3,640.56 ft AMSL (RW-1) during the November 2022 event (Reduced Sampling/Gauging Event).
- The groundwater elevations observed during 2022 appear to be consistent with historical levels, with groundwater flow generally to the southeast.
- The calculated gradients were:
 - 0.024 ft/ft for the March 2022 gauging event,
 - 0.012 ft/ft for the June 2022 gauging event,
 - 0.013 ft/ft for the August 2022 gauging event, and
 - 0.016 ft/ft for the November 2022 gauging event.

Groundwater elevation data for the sampling events is presented in **Table 1**. Groundwater potentiometric surface maps for March, June, August, and November 2022 are presented in **Figure 3**. A cumulative summary of groundwater potentiometric elevation data is presented in **Appendix D**.

2.2 LNAPL Occurrence and Recovery

- LNAPL was present in the four recovery wells (RW-1 through RW-4) during the 2022 monitoring events.
- Monthly LNAPL abatement activities (gauging and hand bailing) were conducted on a monthly basis through May 2022.
- In May 2022, LNAPL skimmer pumps were re-installed in recovery wells (RW-1 and RW-4) and bi-weekly operation and maintenance (O&M) activities were re-initiated.

The range of LNAPL thicknesses gauged in 2022 were:

- 3.39 feet to 4.99 feet in RW-1,
- 0.02 feet to 0.58 feet in RW-2,
- 0.01 feet to 0.61 feet in RW-3, and
- 4.05 feet to 4.75 feet in RW-4.

LNAPL thicknesses gauged in 2022 are included in **Table 1** and with historical data in **Appendix D**. The distribution and extent of LNAPL during the 2022 quarterly monitoring events are presented in **Figure 3**.

2022 Annual Groundwater Monitoring Report

2.2.1 LNAPL Recovery

- Approximately 320 gallons of LNAPL/water mixture were recovered via hand bailing and skimmer system in 2022.
- The cumulative amount of LNAPL/water mixture recovered via the skimmer system during its installation from November 2006 through March 2017 was approximately 3,315 gallons and the amount recovered by hand bailing from April 2017 through 2021 was approximately 136 gallons.
- The cumulative amount of LNAPL recovered (including vapors) during the fifteen mobile dual phase extraction (MDPE) events conducted from 2011 through 2015 was 1,539 gallons.
- Collectively, an approximate total of 5,310 gallons of LNAPL/water mixture have been recovered and removed from the Site since 2006.

2.3 Groundwater Analytical Results

Seven monitoring wells were sampled at the site during the 2022 sampling period. Groundwater analytical results for benzene, toluene, ethylbenzene, xylenes (BTEX) and chloride were compared to the NMWQCC Groundwater Standards. A summary of the groundwater sample analytical results is presented in **Table 2**.

Cumulative summary tables of potentiometric elevation data and groundwater analytical results are presented in **Appendices D** and **E**, respectively. Copies of the certified analytical reports and chain-of-custody documentation from Pace Analytical are provided in **Appendix F**.

BTEX and chloride sample results for the 2022 groundwater monitoring period are presented on **Figure 4**. The groundwater analytical results are further summarized below.

2.3.1 BTEX

- BTEX constituents were not detected during the 2022 monitoring period.

2.3.2 Chloride

- Chloride concentrations did not exceed the NMWQCC standard of 250 milligrams per liter (mg/L) during the 2022 monitoring period.

3 2023 Planned Activities

- LNAPL skimmer pumps were re-installed in recovery wells (RW-1 and RW-4) in May 2022, and bi-weekly operation and maintenance (O&M) activities were re-initiated and are planned to be continued in 2023.
- Semi-annual groundwater sampling events are scheduled for the second and fourth quarters of 2023 in accordance with the Reduction Workplan. Sentry well MW-6 will continue to be gauged and sampled on a quarterly schedule to ensure that the plume is not migrating southwest toward the off-site water wells.

Tables

Table 1
 2022 Summary of Groundwater Gauging Data
 Chevron Environmental Management Company
 Former New Mexico "F" State Tank Battery
 Lea County, New Mexico



Well ID <i>toc elevation</i>	Date	Depth to Groundwater (ft toc ²)	Depth to LNAPL (ft toc ²)	LNAPL Thickness (ft)	Groundwater Elevation (ft msl ²)	Total Well Depth (ft toc ²)	Well Diameter (inches)	Well Screen Interval (ft bgs ⁴)
MW-3 3696.85	3/8/22	57.83	---	---	3639.02	67.83	2	55 - 75
	6/8/22	58.09	---	---	3638.76	---		
	8/15/22	58.05	---	---	3638.80	65.93		
	11/18/22	58.22	---	---	3638.63	67.70		
MW-4 3699.50	3/8/22	61.13	---	---	3638.37	63.74	2	55 - 75
	6/8/22	61.35	---	---	3638.15	63.74		
	8/15/22	61.32	---	---	3638.18	63.73		
	11/18/22	61.48	---	---	3638.02	63.74		
MW-5 3693.52	3/8/22	55.22	---	---	3638.30	64.83	2	48 - 68
	6/8/22	55.40	---	---	3638.12	---		
	8/15/22	33.06	---	---	3660.46	64.79		
	11/18/22	55.54	---	---	3637.98	64.82		
MW-6 3704.81	3/8/22	65.72	---	---	3639.09	73.83	2	56 - 76
	6/8/22	65.93	---	---	3638.88	---		
	8/15/22	65.93	---	---	3638.88	79.84		
	11/18/22	66.23	---	---	3638.58	73.84		
MW-7 3694.58	3/8/22	56.76	---	---	3637.82	---	2	49 - 69
	6/8/22	57.19	---	---	3637.39	---		
	8/15/22	57.20	---	---	3637.38	63.72		
	11/18/22	57.34	---	---	3637.24	63.75		
MW-8 3694.58	3/8/22	55.22	---	---	3639.36	61.23	2	46 - 66
	6/8/22	55.72	---	---	3638.86	---		
	8/15/22	55.72	---	---	3638.86	64.82		
	11/18/22	55.89	---	---	3638.69	61.25		
MW-9R* <i>(not surveyed)</i>	3/8/22	48.03	---	---	---	62.70	2	29.5 - 59.5
	6/8/22	48.18	---	---	---	---		
	8/15/22	48.21	---	---	---	62.23		
	11/18/22	48.40	---	---	---	62.18		
RW-1 3699.92	3/8/22	62.78	58.56	4.22	3640.93	---	4	55 - 75
	6/8/22	63.25	58.26	4.99	3641.15	---		
	8/15/22	62.57	58.85	3.72	3640.69	---		
	11/18/22	62.40	59.01	3.39	3640.56	---		
RW-2 3692.12	3/8/22	51.55	51.25	0.30	3640.84	---	4	47 - 67
	6/8/22	51.98	51.40	0.58	3640.66	---		
	8/15/22	51.52	51.50	0.02	3640.62	---		
	11/18/22	51.69	51.63	0.06	3640.48	---		
RW-3 3690.86	3/8/22	51.00	50.85	0.15	3639.99	---	4	47 - 67
	6/8/22	51.19	51.14	0.05	3639.71	---		
	8/15/22	51.68	51.07	0.61	3639.73	---		
	11/18/22	51.21	51.20	0.01	3639.66	---		
RW-4 3699.94	3/8/22	63.95	59.46	4.49	3640.02	---	4	35 - 75
	6/8/22	64.37	59.62	4.75	3639.83	---		
	8/15/22	64.27	59.65	4.62	3639.81	---		
	11/18/22	63.90	59.85	4.05	3639.67	---		
WW-1 3704.17	3/8/22	NA	-----Not gauged since 2003-----				6	unknown
	6/8/22	NA						
	8/15/22	NA						
	11/18/22	NA						



Table 1
2022 Summary of Groundwater Gauging Data
Chevron Environmental Management Company
Former New Mexico "F" State Tank Battery
Lea County, New Mexico

Well ID <i>toc elevation</i>	Date	Depth to Groundwater (ft toc ²)	Depth to LNAPL (ft toc ²)	LNAPL Thickness (ft)	Groundwater Elevation (ft msl ³)	Total Well Depth (ft toc ²)	Well Diameter (inches)	Well Screen Interval (ft bgs ⁴)
WW-2 3703.84	3/8/22	NA	-----Not gauged since 2003-----				6	unknown
	6/8/22	NA						
	8/15/22	NA						
	11/18/22	NA						

Notes:

toc - top of casing.

msl - mean sea level.

bgs - below ground surface.

NA - Not Accessible

Corrected groundwater elevations from July 1998 to December 2006 were calculated using LNAPL specific gravity of 0.88.

Corrected groundwater elevations from January 2007 to current were calculated using LNAPL specific gravity of 0.897.

MW-1, MW-2 and MW-9 were plugged and abandoned and replaced with RW-1, RW-2 and RW-3 in November 1999.

Monitor wells (MWs) are 2-inch in diameter (except for MW-9R); Recovery wells (RWs) are 4-inch in diameter.

*MW-9R was installed May 19, 2015. An elevation survey of this monitoring well had not been completed prior to submission of this report.

Table 2
2022 Summary of Groundwater Analytical Data
Chevron Environmental Management Company
Former New Mexico "F" State Tank Battery
Lea County, New Mexico



Sample ID	Sample Date	Benzene	Toluene	Ethylbenzene	Total Xylenes	Chloride
New Mexico Water Quality Control Commission Groundwater Standard						
		0.005 ¹	1.0 ¹	0.7 ¹	0.62 ¹	250 ²
MW-3	6/8/22	<0.000190	<0.000412	<0.000160	<0.000510	74.6
MW-4	6/8/22	<0.000190	<0.000412	<0.000160	<0.000510	84.8
MW-5	6/8/22	<0.000190	<0.000412	<0.000160	<0.000510	73.5
	11/18/22	<0.000190	<0.000412	0.000287 B J	<0.000510	80.4
MW-6	3/8/22	<0.000190	<0.000412	<0.000160	<0.000510	82.3
	6/8/22	<0.000190	<0.000412	<0.000160	<0.000510	68.4
	8/15/22	<0.000190	<0.000412	<0.000160	<0.000510	75.6
	11/18/22	<0.000190	<0.000412	0.000286 B J	<0.000510	73.8
MW-7	6/8/22	<0.000190	<0.000412	<0.000160	<0.000510	62.5
MW-8	6/8/22	<0.000190	<0.000412	<0.000160	<0.000510	51.6
MW-9R	6/8/22	<0.000190	<0.000412	<0.000160	<0.000510	104
	11/18/22	<0.000190	<0.000412	0.000288 B J	<0.000510	97.0
RW-1	6/8/22	----- LNAPL Present -----				
	11/18/22	----- LNAPL Present -----				
RW-2	6/8/22	----- LNAPL Present -----				
	11/18/22	----- LNAPL Present -----				
RW-3	6/8/22	----- LNAPL Present -----				
	11/18/22	----- LNAPL Present -----				
RW-4	6/8/22	----- LNAPL Present -----				
	11/18/22	----- LNAPL Present -----				
WW-1	6/8/22	----- NA -----				
WW-2	6/8/22	----- NA -----				

Notes:

Results shown in mg/L.

B = The sample analyte is found in the associated blank.

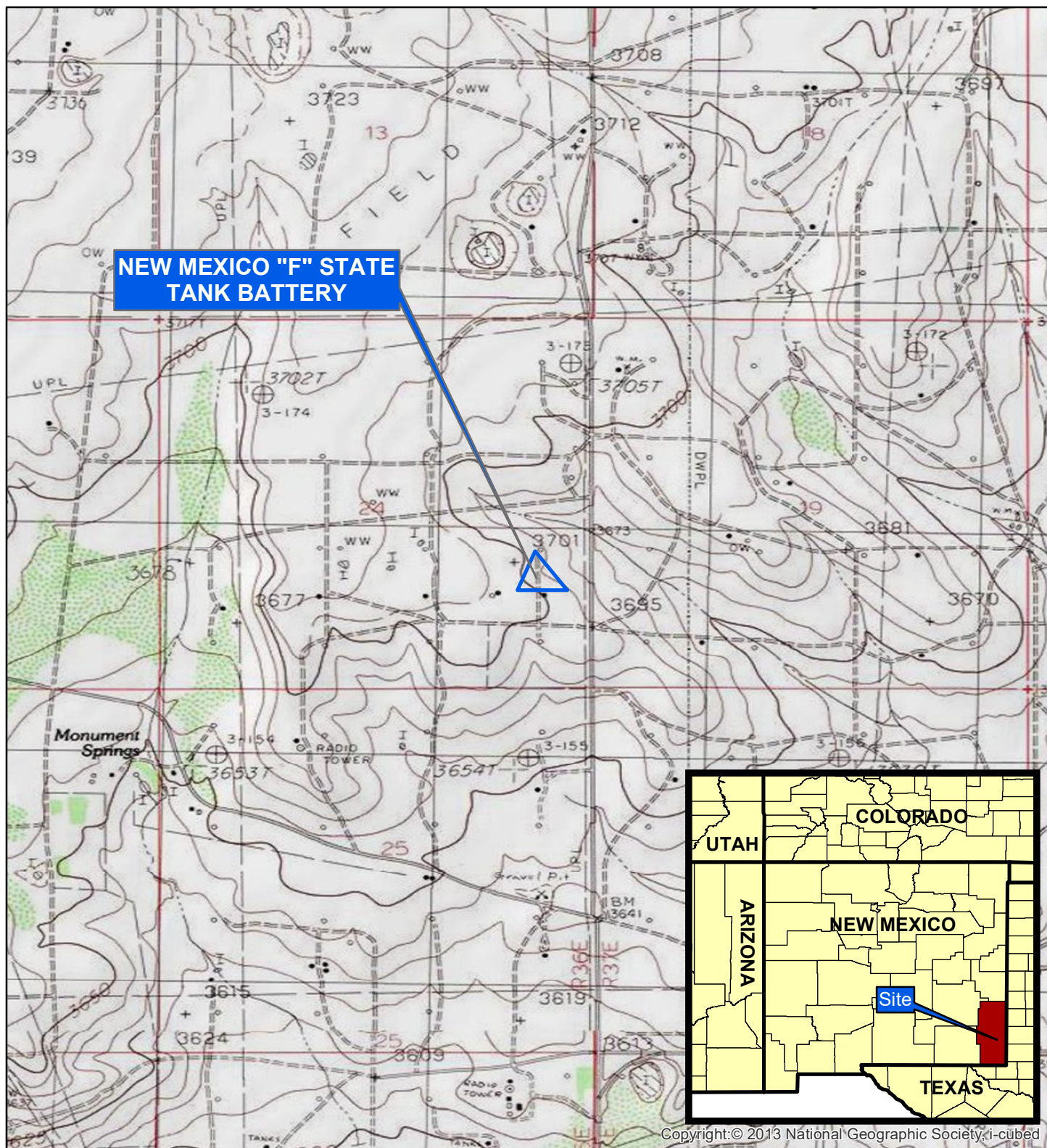
J = Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

¹Human Health Standards for Groundwater.²Other Standards for Domestic Water Supply.

NA = Not Accessible

Figures

Document Path: \\arcadis-us\office\data\Houston-TX\ENV\ChevronTexaco-TX\ENV\State\GIS-F-State\Figure 1 - Site Details Map 01.19.2020



Legend

 Site Boundary

Notes:

1. Datum: D_WGS_1984
2. Source: United States Geological Survey 7.5 Minute Quadrangle Map
3. Site Location: 32.643018, -103.301158

0 1,000 2,000 4,000 Feet



Chevron Environmental Management Company
New Mexico "F" State Tank Battery
Lea County, New Mexico

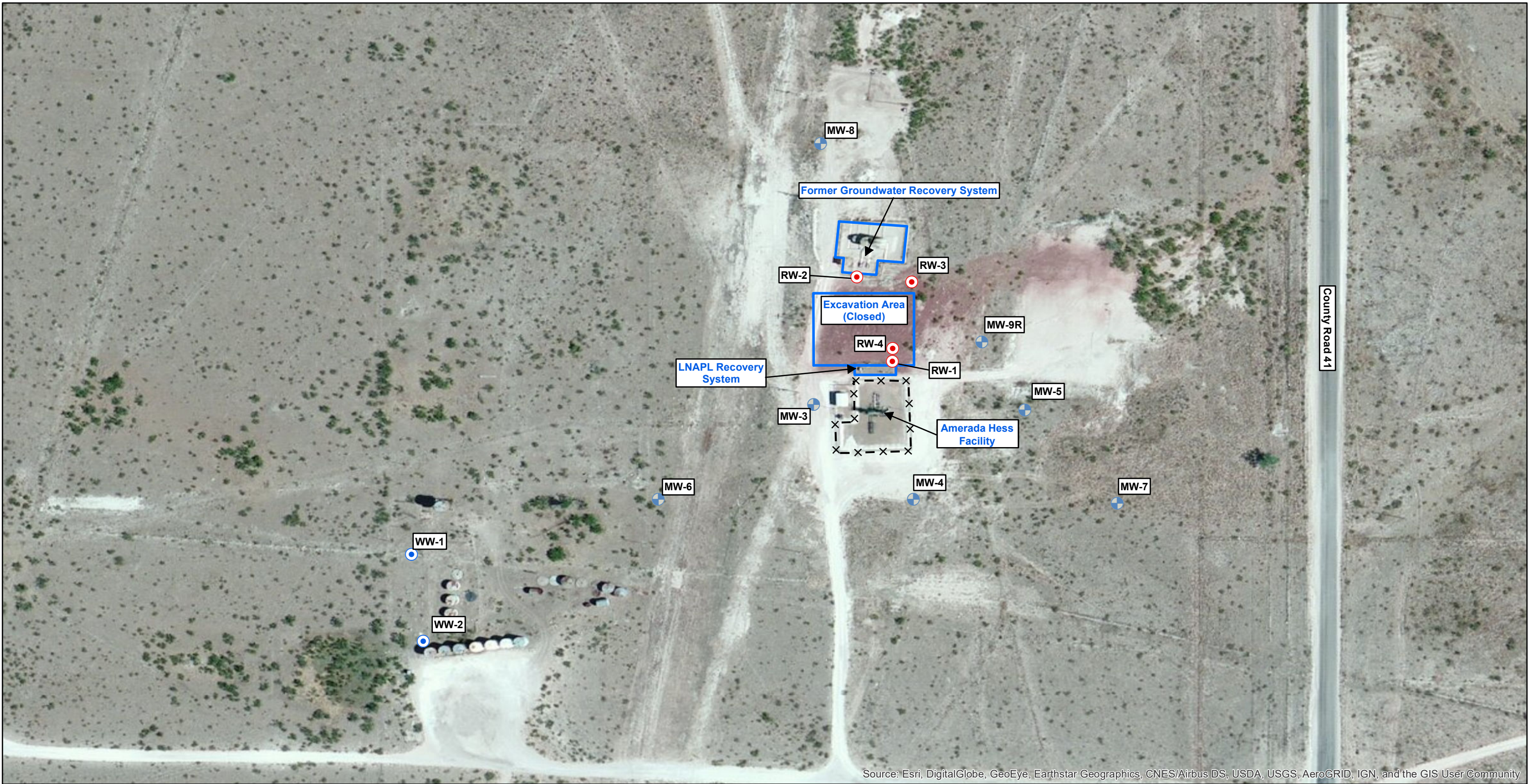
SITE LOCATION MAP

 **ARCADIS**

FIGURE

1

Document Path: T:_ENV\Chevron_NM_F_State\MXD\Figure 2 - Site Details Map 01.17.2020.mxd 2/3/2021 2:22:21 PM Lastedited: avi00976

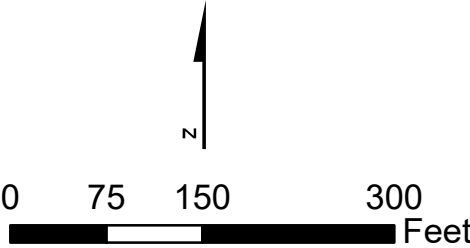


Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Legend

- Monitoring Well
- Recovery Well
- Water Well
- Fence Line

Note:
1. Datum: D_WGS_1984
2. Site Location: 32.643018, -103.301158



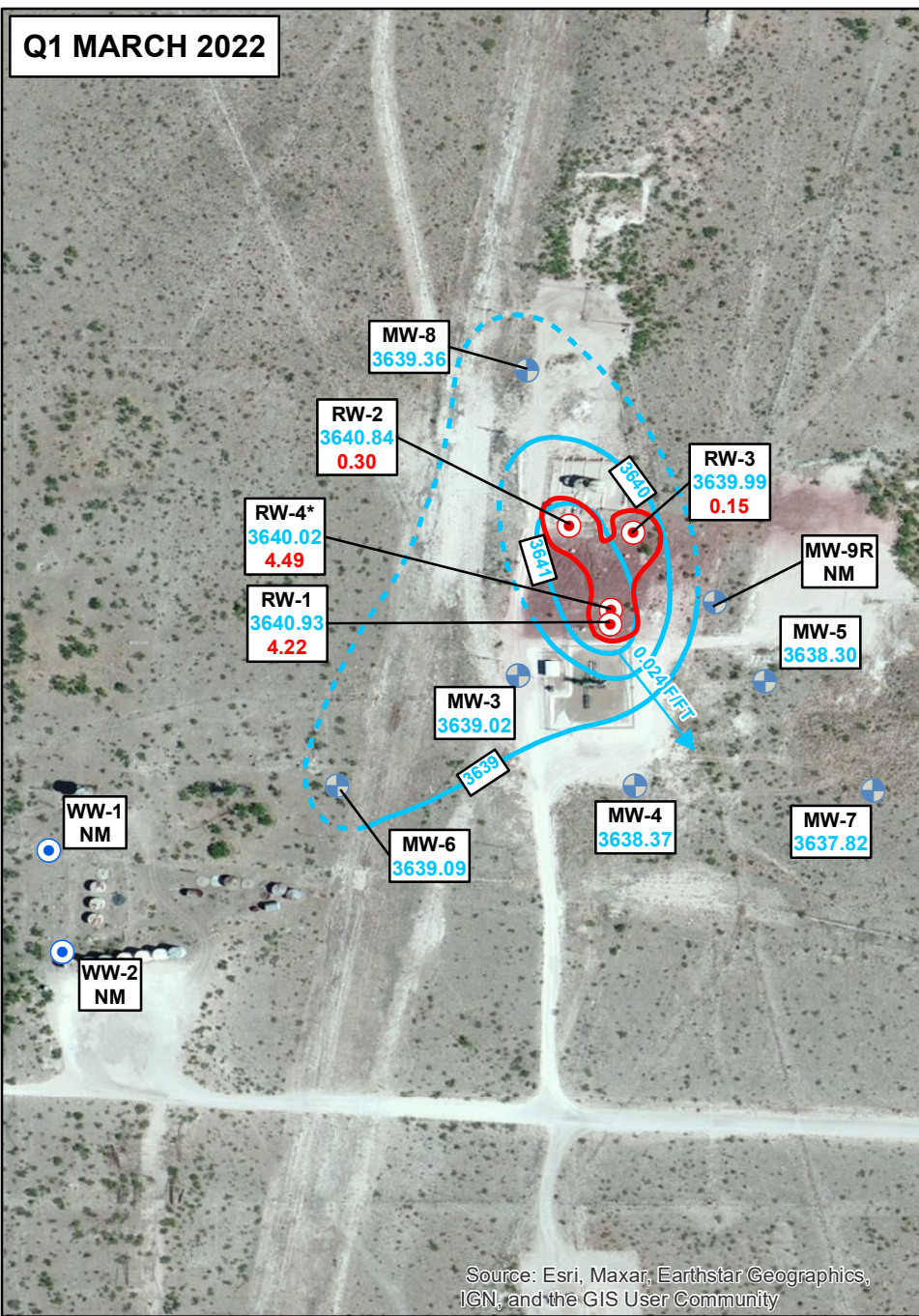
Chevron Environmental Management Company
Former New Mexico "F" State Tank Battery
Lea County, New Mexico

SITE DETAILS MAP

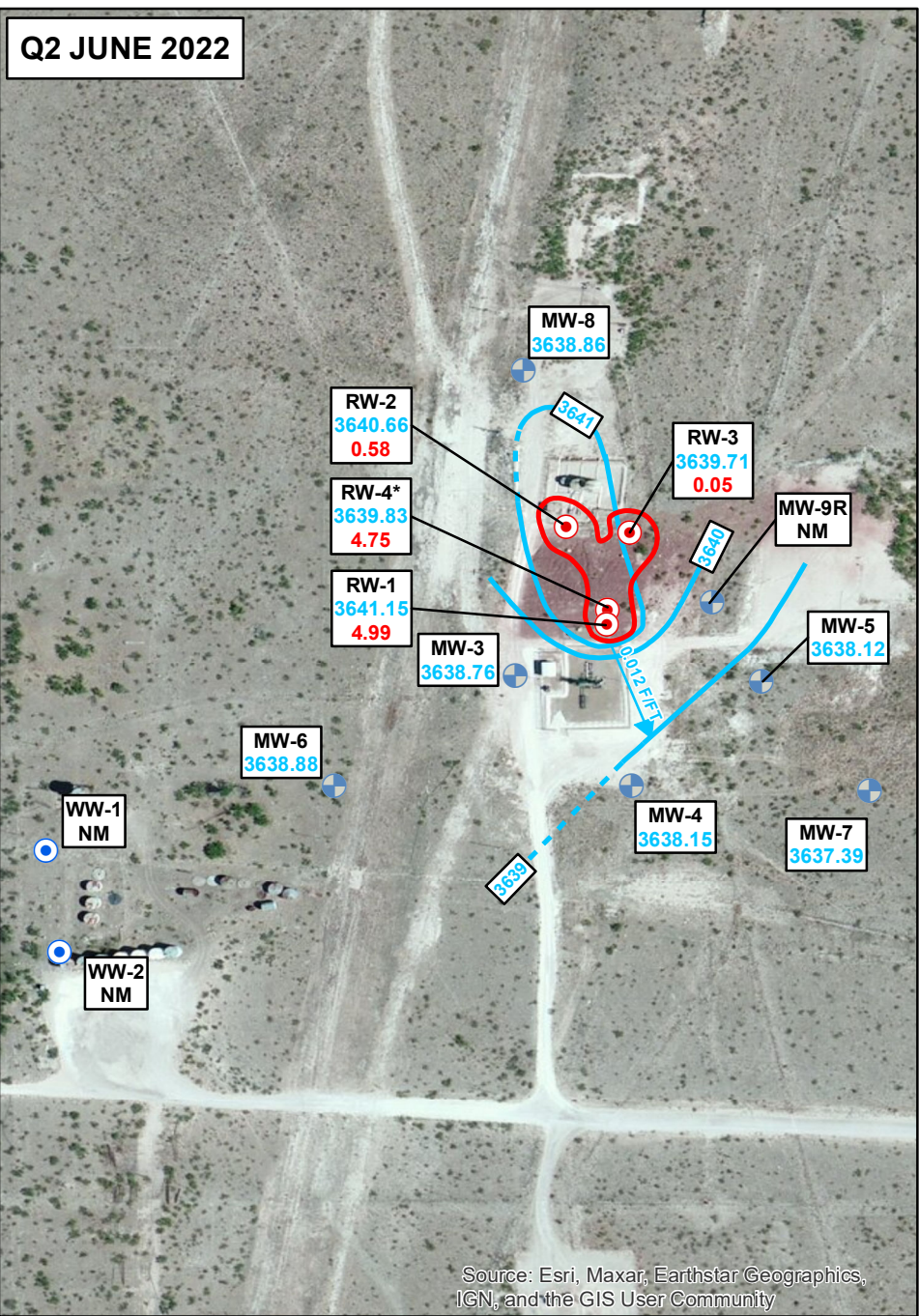


FIGURE
2

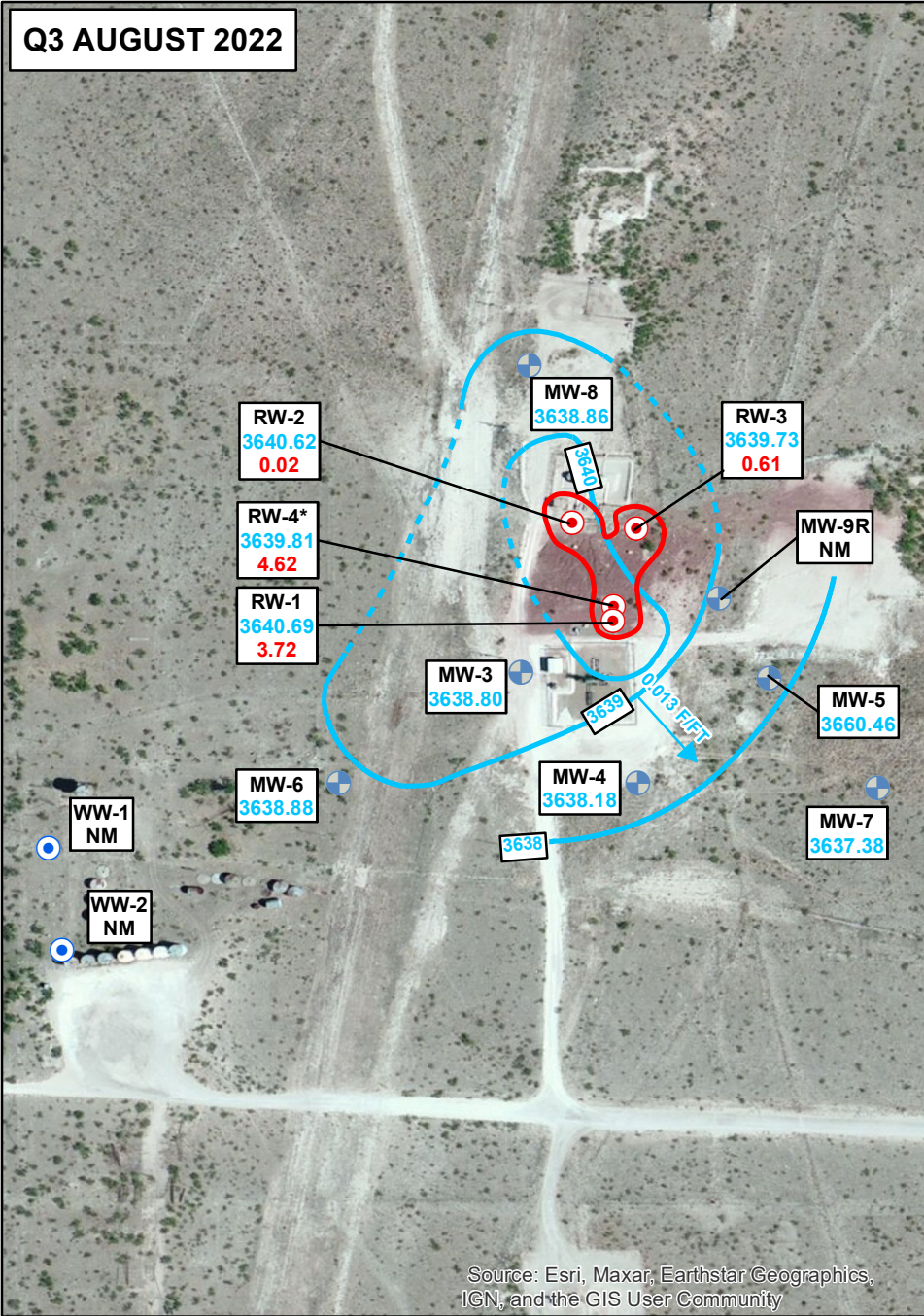
Q1 MARCH 2022



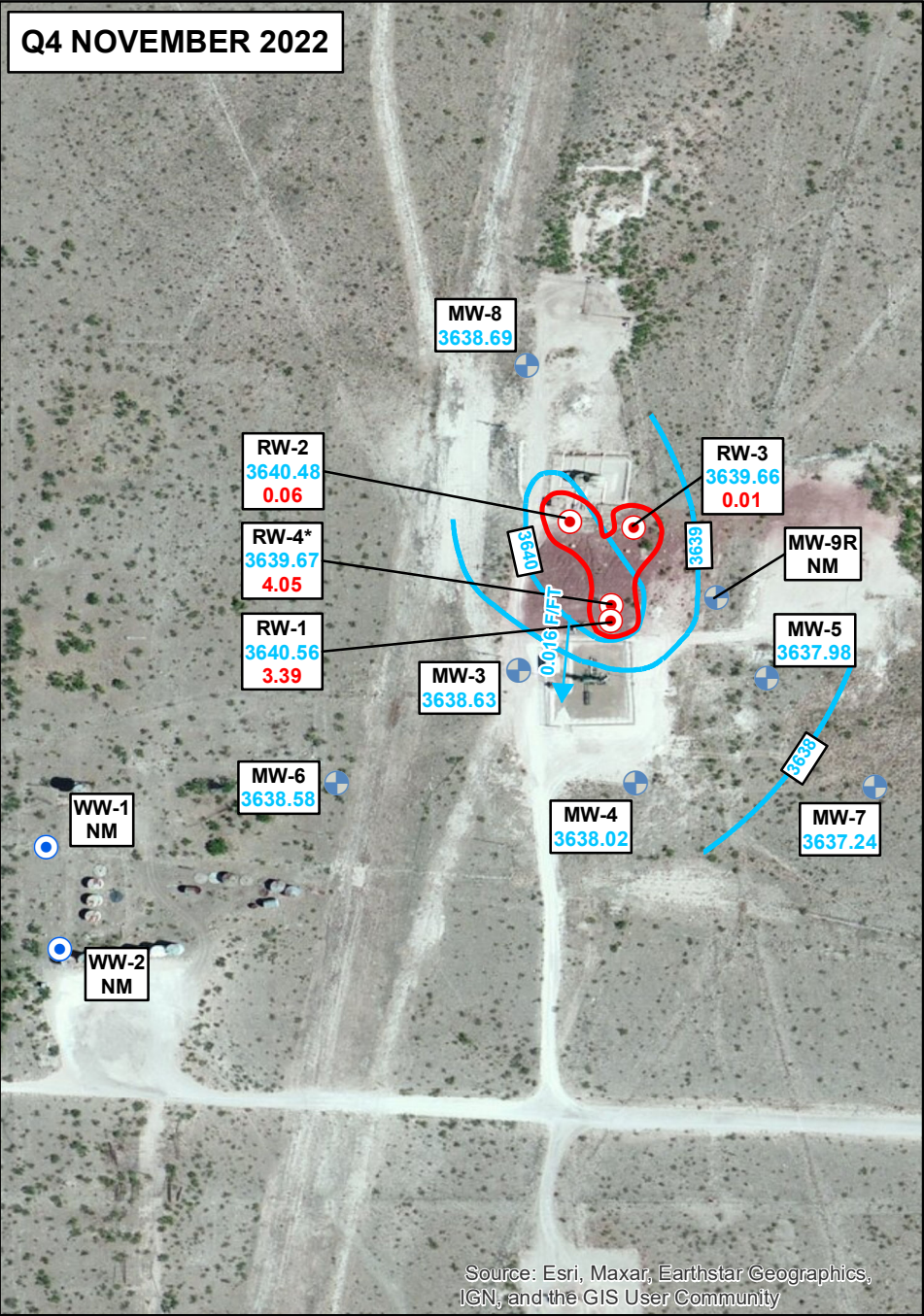
Q2 JUNE 2022



Q3 AUGUST 2022



Q4 NOVEMBER 2022



Monitoring Well Location

Recovery Well Location

Water Well Location

Potentiometric Contour and Elevation

Inferred Potentiometric Contour

Groundwater Elevation
(ft above mean sea level)

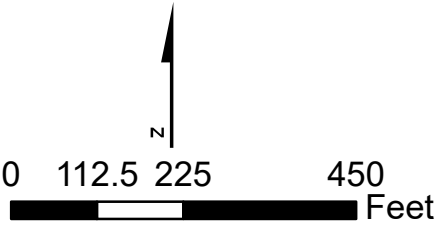
Approximate Groundwater Flow

Approximate LNAPL Contour

LNAPL Thickness (ft)

0.012 FT/FT = Approximate Hydraulic
Gradient (Feet/Foot)

Notes:
1. Datum: D. WGS_1984
2. Site Location: 32.643018, -103.301158
3. NM: Not Measured
4. RW-4 Was Omitted when developing
Potentiometric Surface For All Events in 2022



Chevron Environmental Management Company
Former New Mexico "F" State Tank Battery
Lea County, New Mexico

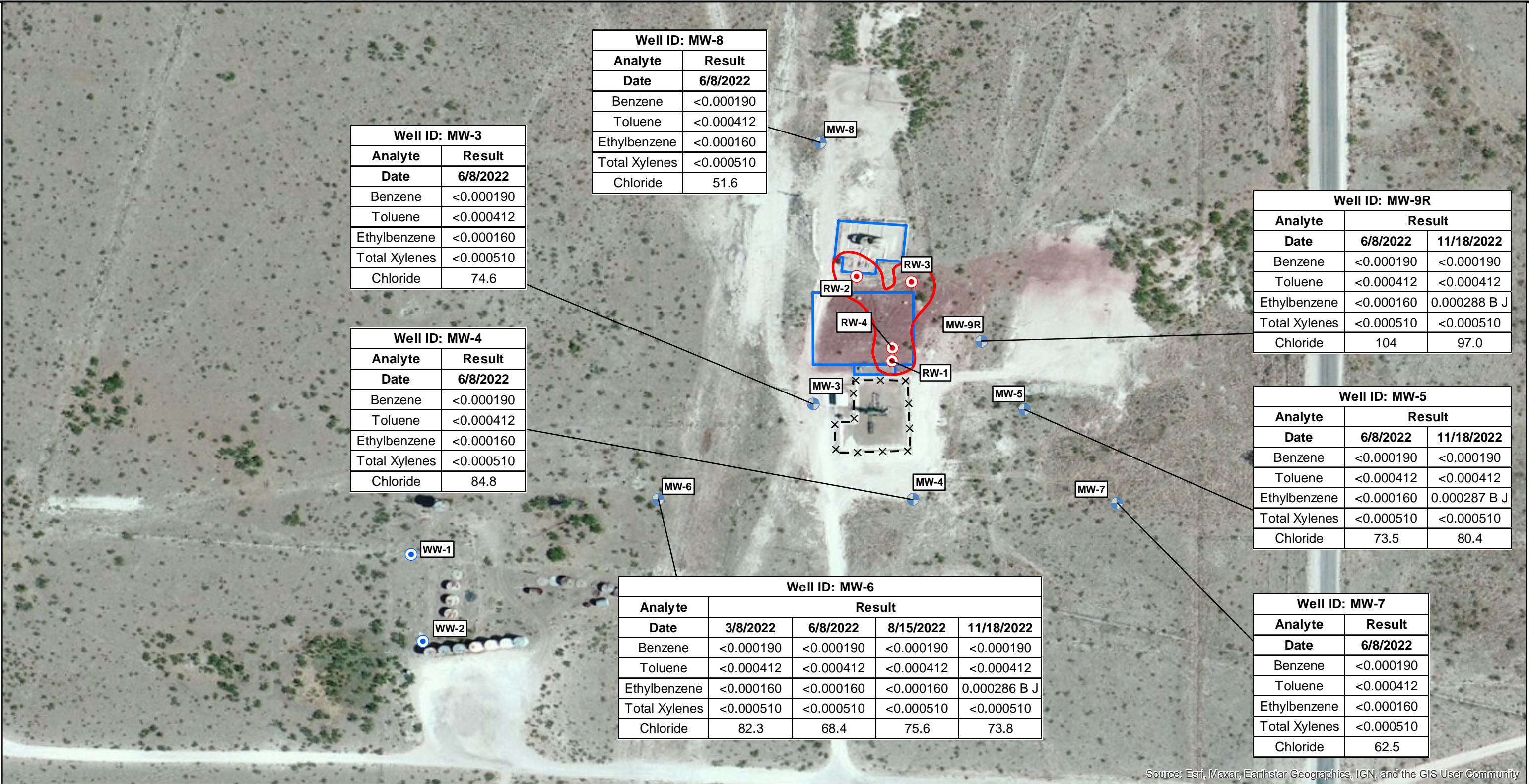
QUARTERLY POTENTIOMETRIC
SURFACE MAPS
2022



ARCADIS

FIGURE
3

Document Path: T:_ENV\Chevron_NM_F_StateMXD\2022_4Q\Figure 4 - Hydrocarbon 2022 Results Map.mxd 2/3/2023 12:54:18 PM Lastedited: msi01059



Well ID: MW-8	
Analyte	Result
Date	6/8/2022
Benzene	<0.000190
Toluene	<0.000412
Ethylbenzene	<0.000160
Total Xylenes	<0.000510
Chloride	51.6

Well ID: MW-3	
Analyte	Result
Date	6/8/2022
Benzene	<0.000190
Toluene	<0.000412
Ethylbenzene	<0.000160
Total Xylenes	<0.000510
Chloride	74.6

Well ID: MW-4	
Analyte	Result
Date	6/8/2022
Benzene	<0.000190
Toluene	<0.000412
Ethylbenzene	<0.000160
Total Xylenes	<0.000510
Chloride	84.8

Well ID: MW-9R		
Analyte	Result	
Date	6/8/2022	11/18/2022
Benzene	<0.000190	<0.000190
Toluene	<0.000412	<0.000412
Ethylbenzene	<0.000160	0.000288 B J
Total Xylenes	<0.000510	<0.000510
Chloride	104	97.0

Well ID: MW-5		
Analyte	Result	
Date	6/8/2022	11/18/2022
Benzene	<0.000190	<0.000190
Toluene	<0.000412	<0.000412
Ethylbenzene	<0.000160	0.000287 B J
Total Xylenes	<0.000510	<0.000510
Chloride	73.5	80.4

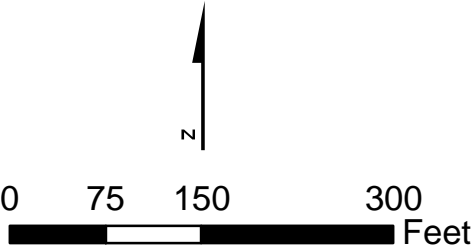
Well ID: MW-7	
Analyte	Result
Date	6/8/2022
Benzene	<0.000190
Toluene	<0.000412
Ethylbenzene	<0.000160
Total Xylenes	<0.000510
Chloride	62.5

Well ID: MW-6				
Analyte	Result			
Date	3/8/2022	6/8/2022	8/15/2022	11/18/2022
Benzene	<0.000190	<0.000190	<0.000190	<0.000190
Toluene	<0.000412	<0.000412	<0.000412	<0.000412
Ethylbenzene	<0.000160	<0.000160	<0.000160	0.000286 B J
Total Xylenes	<0.000510	<0.000510	<0.000510	<0.000510
Chloride	82.3	68.4	75.6	73.8

Legend

- Monitoring Well
- Recovery Well
- Water Well
- Approximate LNAPL Countour
- Site Details
- Fence Line

Note:
1. Datum: D_WGS_1984
2. Site Location: 32.643018, -103.301158
3. [] Duplicate Results
4. BTEX: Benzene, Toluene, Ethylbenzene, Total Xylenes
5. <0.00018 = not detected at or abover Method detection limit
6. J = Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
7. All results are in mg/L.
8. B = The Sample analyte is found in the associated blank.



Source: Esri, Maxar, Earthstar Geographics, IGN, and the GIS User Community

Chevron Environmental Management Company
Former New Mexico "F" State Tank Battery
Lea County, New Mexico

2022 BTEX & CHLORIDE
SAMPLING RESULTS MAP



Appendix A

Site Background



REGULATORY BACKGROUND

The oil field tank battery was historically operated by Texaco Exploration and Production, Inc. (Texaco). An earthen emergency reserve pit was located approximately 175 feet north of the tank battery. The tank battery and reserve pit are visible in aerial photographs dating from 1949 to 1986. The tank battery and ancillary equipment were removed from the Site sometime after 1986.

The former reserve pit was encountered by the Amerada-Hess Corporation during construction of an adjacent production facility. Approximately 7,400 cubic yards of soil and caliche rock were excavated from the former pit and stockpiled at an adjacent location. In 1998, Highlander Environmental Corporation performed a subsurface assessment which included collection of soil samples from the sidewalls and bottom of the excavation, and additionally from the stockpiled soil. Chemical analyses of the soil samples confirmed that concentrations of all constituents of concern were below the historical New Mexico Oil Conservation Division (NMOCD) recommended remediation action levels for the Site. The soil sampling activities and laboratory analyses are documented in the Subsurface Investigation Report, New Mexico "F" State Tank Battery (Highlander Environmental Corporation, September 1998). According to the Annual Groundwater Monitoring Report, New Mexico "F" State Tank Battery (Larson and Associates, Inc., 2005), the pit was closed between September 1998 and November 2003 per closure requirements stipulated by the NMOCD in correspondence dated January 20, 1999. The bottom of the excavated pit was lined with 2 feet of compacted clay, the stockpiled soil was returned to the excavation, and the backfilled excavation was contoured to natural grade.

Nine groundwater monitoring wells (MW-1 through MW-9) were installed at the Site between 1998 and 1999, and Light Non-aqueous Phase Liquid (LNAPL) was found in two wells (MW-1 and MW-2). Three monitoring wells (MW-1, MW-2, and MW-9) were plugged and abandoned in 1999 and replaced with LNAPL recovery wells RW-1, RW-2, and RW-3. On February 17, 2003, the New Mexico Office of the State Engineer (NMOSE) approved permit applications (L-11029, L-11030, and L-11031) to divert underground water for the purpose of LNAPL remediation.

Semi-annual groundwater monitoring, bi-weekly operation and maintenance (O&M) activities, and annual reporting were previously performed by GHD from 2005 through mid-2019. The initial groundwater recovery/gradient control remediation system operated from February 2005 until November 2006 when the system was shut down. A LNAPL skimmer pump was subsequently installed in RW-1, and absorbent socks were placed in RW-2 and RW-3. An additional recovery well (RW-4) was installed in May 2011 and equipped with a LNAPL skimmer pump in October 2012. The LNAPL skimmer system in RW-1 and RW-4 operated on a continuous, automated basis since installation through February 2017.

The recovered LNAPL/water mixture was contained within a 225-gallon holding tank adjacent to RW-1 situated within secondary containment. The pneumatic system was inspected on a bi-weekly basis, the nitrogen supply was replenished as needed, and the frequency/duration of pumping cycles were adjusted based on LNAPL accumulation rates observed in RW-1 and RW-4. The volume of recovered LNAPL/water mixture was recorded during each O&M event, and the fluids were removed from the Site as needed by Nabors Completion and Production Services Company or C&J Energy Services, Inc.

Sentry well MW-6 has been sampled on a quarterly schedule beginning in 2007 to ensure the plume is not migrating to the southwest, toward off-site water wells WW-1 and WW-2. Well MW-9R was installed to the east of the former reserve pit in May 2015 (at a different location than the original MW-9 which was replaced by RW-3 in 1999).

For the purpose of additional LNAPL removal, a total of 14 Mobile Dual Phase Extraction (MDPE) events were conducted on RW-1 and RW-4 in 2011, 2012, and 2013. All but three events were conducted on RW-1 due to the higher LNAPL recovery rate in that well. The durations of each event ranged from 6.5 to 8 hours. A total of 1,495 gallons of LNAPL was recovered during the collective events. The recovery rates from RW-1 during the 2012 events were constant with no declining trends, suggesting that subsequent MDPE events would recover additional LNAPL.

In October 2015, a 24-hour MDPE pilot test event was conducted on RW-1 to evaluate the potential effectiveness of a permanent Dual Phase Extraction (DPE) system. A total of 6,120 gallons of groundwater and 44 gallons of LNAPL were recovered from RW-1 over a 24-hour period. The average depth of induced groundwater depression within the area of hydraulic control was estimated at 1.50 feet below the static level. The LNAPL thickness decreased from 2.25 to 0.27 feet at the conclusion of the event. The LNAPL recovery rate began at 3 percent, and steadily declined over nine hours when LNAPL recovery stopped. LNAPL recovery resumed at event hour 17 at a rate of 0.5 percent, stopped again at event hour 21, then resumed at a 0.25 percent rate during the last two event hours. Due to the low recovery rates and low LNAPL recharge, it was concluded that a permanent DPE system was not feasible for LNAPL recovery at the Site.

Due to the sustained reduction in LNAPL thicknesses after 2015, accompanied by low accumulation rates and negligible LNAPL recovery rates, the LNAPL skimmer pumps in RW-1 and RW-4 were removed in March 2017 and replaced with absorbent socks. All recovery wells at the Site (i.e., RW-1 through RW-4) now contain absorbent socks which are replaced as necessary. LNAPL is hand bailed from RW-1 and RW-4 on a bi-weekly basis. LNAPL has not been present in RW-2 or RW-3 since 2013.

The dissolved phase plume is primarily limited to benzene in wells containing LNAPL (RW-1 and RW-4), and the concentrations remain relatively stable. Concentrations detected in other wells (e.g., RW-2 and RW-3) are below regulatory limits.

Quarterly gauging only (no hand-bailing) was initiated in July 2020 and conducted through August 2021.

Monthly LNAPL gauging and hand-bailing was re-initiated in September 2021 and conducted through May 2022. In May 2022, LNAPL skimmer pumps were re-installed in recovery wells (RW-1 and RW-4) and bi-weekly operation and maintenance (O&M) activities were re-initiated.

REGULATORY FRAMEWORK

The NMOCD provides guidance for remediation of contaminants of oil field wastes or products in Guidelines for Remediation of Leaks, Spills, and Releases (August 13, 1993). The guidance requires remediation of groundwater to the human health standards of the New Mexico Water Quality Control

Commission (NMWQCC) set forth in New Mexico Administrative Code (NMAC) 20.6.2.3103. NMAC 20.6.2 was amended and revised standards were effective December 21, 2018. Standards for benzene, toluene, ethylbenzene, xylenes (BTEX) and chloride are listed below:

Analyte	NMWQCC Standard for Groundwater (mg/L)
Benzene	0.005
Toluene	1.0
Ethylbenzene	0.7
Total Xylenes	0.62
Chloride	250

Note: mg/L = milligrams per liter

GEOLOGY/HYDROGEOLOGY ASSESSMENT

Site Setting

The Site is located on Lea County Road 41 (Maddox Road), approximately three miles northwest of Monument, in the northeast quarter (NE/4) of the southeast quarter (SE/4), Section 24, Township 19 South, Range 36 East, Lea County, New Mexico. The Site's coordinated are latitude 32.643018 and longitude -103.301158.

Land in the vicinity of the Site is utilized primarily for livestock ranching and oil and gas production, and production and has areas of undeveloped rangeland vegetated with indigenous grass. No active Chevron U.S.A. Inc. (Chevron) operations are present in the area. A Site Location Map is presented as **Figure 1**. A Site Detail Map and the surrounding vicinity are presented on **Figure 2**.

Regional Geologic Conditions

The region is characterized by a surface cover of up to 200 feet of unconsolidated to semi-lithified sediments of the Ogallala Formation consisting of sand, clay, and fluvial gravel. The upper portion of the Ogallala Formation has been heavily cemented by caliche. The Tertiary-aged sediments are underlain by the Triassic-aged Dockum Group shale ("red beds").

Hydrogeologic Conditions

Regional groundwater flow in the Ogallala Aquifer is controlled by the slope of the land surface to the south with localized eastward flow into the valley of Monument Draw. The aquifer typically behaves as an unconfined aquifer. Monument Draw is an intermittent stream that contains water only after heavy rains (Texas Water Development Board [TWDB], 2008)¹. The Dockum Group Shale is considered the underlying aquitard for the Ogallala Aquifer.

Site Hydrogeology

Groundwater beneath the Site is found within the upper Ogallala deposits. The depth to groundwater at the Site ranges from approximately 47 to 75 ft bgs.

At the Site, the local groundwater flow direction trends to the southeast with an average horizontal hydraulic gradient of approximately 0.013 feet per foot (ft/ft). The southeast groundwater flow direction observed at the Site is consistent with the regional groundwater flow direction to the southeast in the Ogallala Aquifer.

Appendix B

Groundwater Monitoring and LNAPL Operation and Maintenance (O&M) Reduction Workplan



Jason Michelson
Project Manager

**Chevron Environmental
Management Company**
1500 Louisiana Street, #38116
Houston, Texas 77002
Work: 832-854-5601
Cell: 281-660-8564
jmichelson@chevron.com

July 27, 2020

EMNRD/OCD
5200 Oakland, NE, Suite 100
Albuquerque, NM 87113

**Re: Former F-State Tank Battery
Case No. 1RP-258
Proposed Groundwater Monitoring and LNAPL O&M Reduction Workplan
Lea County, New Mexico**

Dear whom it concerns,

Please find enclosed for your files, copies of the following Workplan:

- Former F-State Tank Battery Proposed Groundwater Monitoring and LNAPL O&M Reduction Workplan

The submittal was prepared by Arcadis on behalf of Chevron Environmental Management Company (CEMC).

Please do not hesitate to call Scott Foord with Arcadis U.S., Inc., the current consultant, at 713-953-4853 or myself at 832-854-5601, should you have any questions.

Sincerely,

Jason Michelson
Jason Michelson

Encl. Former F-State Tank Battery 1RP-258 Proposed Groundwater Monitoring and LNAPL O&M Reduction Workplan



Mr. Bradford Billings
Project Manager
EMNRD/OCD
5200 Oakland, NE, Suite 100
Albuquerque, NM 87113

Arcadis U.S., Inc.
10205 Westheimer Road
Suite 800
Houston
Texas 77042
Tel 713 953 4800
Fax 713 977 4620
www.arcadis.com

Subject:

Proposed Groundwater Monitoring and LNAPL O&M Reduction Workplan
Chevron Environmental Management Company
Former F-State Tank Battery
Lea County, New Mexico
Case No. 1RP-258

ENVIRONMENT

Date:
July 16, 2020

Contact:
Scott Foord

Phone:
713.953.4853

Email:
William.foord@arcadis.com

ARCADIS U.S., Inc.
TX Engineering License # F-533
Geoscientist License # 50158

Dear Mr. Billings:

At the request of Chevron Environmental Management Company (CEMC), Arcadis U.S., Inc. (Arcadis) is providing this workplan to request the reduction of groundwater monitoring frequency and a reduction of light non-aqueous phase liquid (LNAPL) recovery event frequency for the Former F-State Tank Battery site (Site).

The Former F-State Tank Battery is located on Lea County Road 41 (Maddox Road), approximately three miles northwest of Monument, New Mexico, in the northeast quarter (NE/4) of the southeast quarter (SE/4), Section 24, Township 19 South, Range 36 East, Lea County, New Mexico. The Site's coordinates are latitude 32.643018 and longitude -103.301158.

Groundwater monitoring began at the Site in July 1998, and the Site is currently monitored semi-annually from a network of 7 monitoring wells, 4 recovery wells, and 2 off-site water wells (two full site groundwater sampling events are currently being conducted). Sentry well MW-6 is additionally sampled quarterly to ensure the dissolved-phase plume is not migrating southwest towards the off-site water wells (WW-1 and WW-2). At the request of the NMOCD, LNAPL samples are collected annually from recovery wells containing measurable LNAPL. Two recovery wells (RW-1 and RW-4) currently contain LNAPL and bi-weekly LNAPL gauging and hand-bailing activities are currently conducted. All monitoring wells without LNAPL are currently sampled during both semi-annual (full site) sampling events. The constituents of concern (COCs) in groundwater currently being

Mr. Bradford Billings
EMNRD/OCD
July 16, 2020

analyzed for include benzene, ethylbenzene, toluene, xylenes (BTEX) and chloride. Neither BTEX or chloride have been detected above New Mexico Water Quality Control Commission (NMWQCC) screening standards or typically above the laboratory method detection limits in site monitoring or water wells for the life of the project. The BTEX plume has remained stable and within the proximity of the four recovery wells only. The Site groundwater flow is generally to the southeast.

For additional site-specific background information please refer to the GHD, 2018 Annual Groundwater Monitoring Report, dated February 2019. The 2019 Annual Groundwater Monitoring Report will be submitted by the end of the third quarter 2020.

PROPOSED REDUCED SAMPLING PLAN

The following Workplan outlines the specifics of the proposed reduced sampling plan and the methodology for the selection of those monitoring wells. One semi-annual monitoring event (full site) will include sampling all site wells as currently conducted. The second semi-annual sampling event will be reduced to only sampling monitoring wells based on the following proposed sampling methodology. Sentry well MW-6 will continue to be sampled quarterly to ensure the dissolved-phase plume is not migrating southwest towards the off-site water wells. The groundwater sampling frequency of all other wells will be assessed yearly based on the results of the sampling events for the lifespan of the project and will increase to quarterly for a minimum of eight consecutive quarters prior to closure request for the Site.

Additionally, CEMC requests the reduction of current LNAPL gauging and hand-bailing activities schedule from bi-weekly to quarterly gauging only (no hand-bailing) for one year (through August 2021), to allow the current LNAPL conditions at the Site to equilibrate so that a more practical/efficient LNAPL recovery method can be evaluated and initiated.

CEMC also request to discontinue the annual collection of LNAPL samples from recovery wells for analytical analyses as data trends for these wells have been established.

The following sections provide specifics for the proposed reduced groundwater monitoring plan:

Sampling Reduction for Non-impacted Monitoring Wells

Site monitoring wells with COC concentrations reported below NMWQCC exceedance standards for two consecutive years or longer will not be gauged or sampled during the second semi-annual monitoring event except for sentry well MW-6.

The Site wells currently selected for reduction from the second semi-annual sampling event include: MW-3, MW-4, MW-5, MW-7, MW-8, MW-9R, WW-1, and WW-2.

The previously referenced wells have been evaluated based on historical concentration trends, historical concentration trends of nearby monitoring wells, potential receptors, and the groundwater gradient.

The proposed list of Site monitoring wells that will be sampled during each semi-annual event are presented on attached **Table 1** (Sampling and Analysis Plan).

Mr. Bradford Billings
EMNRD/OCD
July 16, 2020

The Site monitoring wells that will be sampled during the reduced event are presented on **Figure 1** (Potentiometric Surface Map), and with current groundwater constituent concentrations on **Figure 2** (Proposed Groundwater Monitoring Reduction Plan).

The Summary of Historical Groundwater Analytical Results is presented in **Table 2**.

Request to Reduce LNAPL Recovery and Gauging

As stated previously, CEMC additionally requests the reduction of the current bi-weekly LNAPL gauging and hand-bailing activities schedule to quarterly gauging only (no hand-bailing) for one year through August 2021 to allow the current LNAPL conditions at the Site to equilibrate so that a more practical/efficient LNAPL recovery method can be evaluated and initiated. CEMC will assess findings from the LNAPL gauging data collected through August 2021 to evaluate more practical and effective LNAPL recovery system alternatives.

CONTACT

Arcadis is prepared to initiate the scope of work immediately. If you have any questions or comments, please contact either Scott Foord by phone at 713 953 4853 or by e-mail at william.foord@arcadis.com or Greg Cutshall by phone at 859 327 4626 or by email at greg.cutshall@arcadis.com.

Sincerely,

Arcadis U.S., Inc.



Scott Foord
Project Manager

Copies:
Greg Cutshall, Program Manager

Enclosures:

Tables

- 1 Sampling and Analysis Plan
- 2 Summary of Historical Groundwater Analytical Results

Figures

- 1 Potentiometric Surface Map
- 2 Proposed Groundwater Monitoring Reduction Plan

TABLES

Table 1
Sampling and Analysis Plan
Chevron Environmental Management Company
Former F-State Tank Battery
Lea County, New Mexico
Case No. 1RP-258



Well ID	1st Quarter Sentry Well MW-6 only		2nd Quarter First Semi-Annual Event		3rd Quarter Sentry Well MW-6 only		4th Quarter Second Semi-Annual Event	
	BTEX	Chloride	BTEX	Chloride	BTEX	Chloride	BTEX	Chloride
MW-3	--	--	X	X	--	--	--	--
MW-4	--	--	X	X	--	--	--	--
MW-5	--	--	X	X	--	--	--	--
MW-6	X	X	X	X	X	X	X	X
MW-7	--	--	X	X	--	--	--	--
MW-8	--	--	X	X	--	--	--	--
MW-9R	--	--	X	X	--	--	--	--
RW-1	--	--	--	--	--	--	--	--
RW-2	--	--	X	X	--	--	X	X
RW-3	--	--	X	X	--	--	X	X
RW-4	--	--	--	--	--	--	--	--
WW-1	--	--	X	X	--	--	--	--
WW-2	--	--	X	X	--	--	--	--

Notes:

USEPA = United States Environmental Protection Agency

X = Sample be collected at monitoring well during respective event.

-- = Sample will not be collected at monitoring well

Bold = LNAPL currently present in well

Table 2
Cumulative Groundwater Analytical Data
Chevron Environmental Management Company
Former New Mexico "F" State Tank Battery
Lea County, New Mexico



Sample ID	Sample Date	Benzene	Toluene	Ethylbenzene	Total Xylenes	Chloride
New Mexico Water Quality Control Commission Groundwater Standard						
		0.005 ¹	1.0 ¹	0.7 ¹	0.62 ¹	250 ²
MW-3	7/28/98	0.003	<0.001	<0.001	0.002	36
MW-3	2/16/01	<0.005	<0.005	<0.005	<0.005	31
MW-3	6/12/02	<0.005	<0.005	<0.005	<0.005	27.1
MW-3	11/26/03	<0.001	<0.001	<0.001	<0.001	31.9
MW-3	6/6/03	<0.001	<0.001	<0.001	<0.001	27.5
MW-3	12/4/03	<0.001	<0.001	<0.001	0.0017	26.1
MW-3	7/2/04	<0.005	<0.005	<0.005	<0.005	28
MW-3	12/21/04	<0.005	<0.005	<0.005	<0.005	32.3
MW-3	6/6/05	<0.00100	<0.00100	<0.00100	<0.00100	34.3
MW-3	12/13/05	<0.005	<0.005	<0.005	<0.010	29.3
MW-3	6/27/06	<0.005	<0.005	<0.005	<0.010	31.1
MW-3	12/19/06	<0.005	<0.005	<0.005	<0.001	28
MW-3	6/27/07	<0.005	<0.005	<0.005	<0.010	31
MW-3	12/14/07	<0.005	<0.005	<0.005	<0.010	31
MW-3	6/5/08	<0.00037	<0.00039	<0.00042	<0.00035	30
MW-3	11/14/08	<0.00037	<0.00039	<0.00042	<0.00035	32
DUP	11/14/08	<0.00037	<0.00039	<0.00042	<0.00035	32
MW-3	6/16/09	<0.00037	<0.00039	<0.00042	<0.00035	35
MW-3	11/20/09	<0.00037	<0.00039	<0.00042	<0.00035	40
MW-3	7/1/10	<0.00020	<0.00020	<0.00020	<0.00070	50.4
MW-3	11/9/10	<0.0001	<0.0001	<0.0001	<0.0003	64
MW-3	6/2/11	0.00053J	0.00061J	<0.0010	<0.0030	90.7
MW-3	12/2/11	<0.0001	<0.0001	<0.0001	<0.0003	85.0
DUP	12/2/11	<0.0001	<0.0001	<0.0001	<0.0003	85.7
MW-3	6/26/12	<0.0001	<0.0001	<0.0001	<0.0001	114
MW-3	11/26/12	<0.0001	<0.0002	0.00116	0.00345	94.6
MW-3	6/14/13	<0.001	<0.002	<0.001	<0.001	79
MW-3	11/27/13	<0.001	<0.002	<0.001	<0.001	101
MW-3	8/1/14	<0.001	<0.002	<0.001	<0.003	75.6
MW-3	12/12/14	<0.001	<0.002	<0.001	<0.003	137
MW-3	6/9/15	<0.001	<0.002	<0.001	<0.003	89.1
MW-3	12/9/15	<0.001	<0.002	<0.001	<0.003	67.8
MW-3	6/21/16	<0.002	<0.002	<0.002	<0.002	57.9
MW-3	12/8/16	<0.002	<0.002	<0.002	<0.002	60.6
MW-3	6/14/17	<0.002	<0.002	<0.002	<0.002	55.0
MW-3	11/29/17	<0.002	<0.002	<0.002	<0.002	49.8
MW-3	6/14/18	<0.002	<0.002	<0.002	<0.002	50.6
MW-3	12/13/18	<0.0020	<0.0020	<0.002	<0.002	50.0
MW-3	5/6/19	<0.0020	<0.0020	<0.0020	<0.0020	53.0
MW-3	11/19/19	<0.0010	<0.0010	<0.0010	<0.0020	59.0

Table 2
Cumulative Groundwater Analytical Data
Chevron Environmental Management Company
Former New Mexico "F" State Tank Battery
Lea County, New Mexico



Sample ID	Sample Date	Benzene	Toluene	Ethylbenzene	Total Xylenes	Chloride
New Mexico Water Quality Control Commission Groundwater Standard						
		0.005 ¹	1.0 ¹	0.7 ¹	0.62 ¹	250 ²
MW-4	7/28/98	<0.001	<0.001	<0.001	<0.001	94
MW-4	2/16/01	<0.005	<0.005	<0.005	0.008	170
MW-4	6/12/02	<0.005	<0.005	<0.005	<0.005	85.6
MW-4	11/26/03	0.002	<0.001	<0.001	<0.005	160
MW-4	6/6/03	<0.001	<0.001	<0.001	0.0026	111
MW-4	12/4/03	0.0015	<0.001	<0.001	<0.001	104
MW-4	7/2/04	<0.001	<0.001	<0.001	<0.001	72.4
MW-4	12/21/04	<0.005	<0.005	<0.005	<0.005	59.7
MW-4	6/6/05	<0.001	<0.001	<0.001	<0.001	58.4
MW-4	12/13/05	<0.005	<0.005	<0.005	<0.010	55.3
MW-4	6/27/06	0.000597	<0.0005	<0.0005	<0.001	48.8
MW-4	12/19/06	<0.005	<0.005	<0.005	<0.001	34
MW-4	6/27/07	<0.005	<0.005	<0.005	<0.010	39
MW-4	12/13/07	0.000968	<0.000500	<0.000500	0.00254	63.1
MW-4	6/5/08	<0.00037	<0.00039	<0.00042	<0.00035	61
MW-4	11/14/08	<0.00037	<0.00039	<0.00042	<0.00035	52
MW-4	6/16/09	<0.00037	<0.00039	<0.00042	<0.00035	59
MW-4	11/20/09	<0.00037	<0.00039	<0.00042	<0.00035	58
MW-4	7/1/10	0.00032J	<0.00020	<0.00020	<0.00070	54.5
MW-4	11/9/10	<0.0001	<0.0001	<0.0001	<0.0003	57.5
DUP	11/9/10	<0.0001	<0.0001	<0.0001	<0.0003	58.4
MW-4	6/2/11	<0.0001	<0.0001	<0.0001	<0.0003	49.8
MW-4	12/2/11	<0.0001	<0.0001	<0.0001	<0.0003	142
MW-4	6/26/12	<0.0001	<0.0001	<0.0001	<0.0001	73.7
MW-4	11/26/12	<0.0001	<0.0001	<0.0001	<0.0001	69.3
MW-4	6/14/13	<0.001	<0.002	<0.001	<0.001	59.5
MW-4	11/27/13	<0.001	<0.002	<0.001	<0.001	65.1
MW-4	8/1/14	<0.001	<0.002	<0.001	<0.003	71.8
MW-4	12/12/14	<0.001	<0.002	<0.001	<0.003	104
MW-4	6/9/15	<0.0001	<0.0001	<0.0001	<0.0003	98.5
MW-4	12/9/15	<0.0001	<0.0001	<0.0001	<0.0003	70.6
MW-4	6/21/16	<0.002	<0.002	<0.002	<0.002	60.9
MW-4	12/8/16	<0.002	<0.002	<0.002	<0.002	86.2
MW-4	6/14/17	<0.002	<0.002	<0.002	<0.002	86.4
MW-4	11/29/17	<0.002	<0.002	<0.002	<0.002	81.7
MW-4	6/14/18	<0.002	<0.002	<0.002	<0.002	96.4
MW-4	12/13/18	<0.002	<0.002	<0.002	<0.002	77.6
MW-4	5/6/19	<0.002	<0.002	<0.002	<0.002	54.6
MW-4	11/19/19	<0.0010	<0.0010	<0.0010	<0.002	99

Table 2
Cumulative Groundwater Analytical Data
Chevron Environmental Management Company
Former New Mexico "F" State Tank Battery
Lea County, New Mexico



Sample ID	Sample Date	Benzene	Toluene	Ethylbenzene	Total Xylenes	Chloride
New Mexico Water Quality Control Commission Groundwater Standard						
		0.005 ¹	1.0 ¹	0.7 ¹	0.62 ¹	250 ²
MW-5	7/28/98	<0.001	<0.001	<0.001	<0.001	360
MW-5	2/16/01	<0.005	<0.005	<0.005	<0.005	120
MW-5	6/12/02	<0.005	<0.005	<0.005	<0.005	90.2
MW-5	11/26/03	0.002	<0.001	0.003	<0.002	59.1
MW-5	6/6/03	<0.001	<0.001	<0.001	<0.001	48.6
MW-5	12/4/03	<0.001	<0.001	<0.001	<0.001	36.5
MW-5	7/2/04	<0.005	<0.005	<0.005	<0.005	32.9
MW-5	12/21/04	<0.005	<0.005	<0.005	<0.005	39.8
MW-5	6/6/05	<0.001	<0.001	<0.001	<0.001	41.1
MW-5	12/13/05	<0.005	<0.005	<0.005	<0.010	39.7
MW-5	6/27/06	<0.0005	<0.0005	<0.0005	<0.001	43.2
MW-5	12/19/06	<0.005	<0.005	<0.005	<0.001	51
MW-5	6/27/07	<0.005	<0.005	<0.005	<0.001	67
MW-5	12/14/07	<0.005	<0.005	<0.005	<0.001	101
MW-5	6/4/08	<0.00037	<0.00039	<0.00042	<0.00035	78.7
MW-5	11/14/08	<0.00037	<0.00039	<0.00042	<0.00035	100
MW-5	6/16/09	<0.00037	<0.00039	<0.00042	<0.00035	140
MW-5	11/20/09	<0.00037	<0.00039	<0.00042	<0.00035	110
MW-5	7/1/10	<0.0002	<0.0002	<0.0002	<0.0007	115
MW-5	11/9/10	<0.0001	<0.0001	<0.0001	<0.0003	168
MW-5	6/2/11	<0.0001	<0.0001	<0.0001	<0.0003	134
MW-5	12/2/11	<0.0001	<0.0001	<0.0001	<0.0003	172
MW-5	6/26/12	<0.0001	<0.0001	<0.0001	<0.0001	137
MW-5	11/26/12	<0.0001	<0.0001	<0.0001	<0.0001	110
MW-5	6/14/13	<0.001	<0.002	<0.001	<0.001	66.6
MW-5	11/27/13	<0.001	<0.002	<0.001	<0.001	72.3
MW-5	8/1/14	<0.001	<0.002	<0.001	<0.003	69.5
MW-5	12/12/14	<0.001	<0.002	<0.001	<0.003	66.9
MW-5	6/9/15	<0.001	<0.002	<0.001	<0.003	69.1
MW-5	12/9/15	<0.001	<0.002	<0.001	<0.003	44
MW-5	6/21/16	<0.002	<0.002	<0.002	<0.002	39.9
MW-5	12/8/16	<0.002	<0.002	<0.002	<0.002	39.1
MW-5	6/14/17	<0.002	<0.002	<0.002	<0.002	42.1
MW-5	11/29/17	<0.002	<0.002	<0.002	<0.002	35.6
MW-5	6/14/18	<0.002	<0.002	<0.002	<0.002	37.6
MW-5	12/13/18	<0.002	<0.002	<0.002	<0.002	37.4
MW-5	5/6/19	<0.002	<0.002	<0.002	<0.002	114.0
MW-5	11/19/19	<0.0010	<0.0010	<0.0010	<0.002	49.0

Table 2
Cumulative Groundwater Analytical Data
Chevron Environmental Management Company
Former New Mexico "F" State Tank Battery
Lea County, New Mexico



Sample ID	Sample Date	Benzene	Toluene	Ethylbenzene	Total Xylenes	Chloride
New Mexico Water Quality Control Commission Groundwater Standard						
		0.005 ¹	1.0 ¹	0.7 ¹	0.62 ¹	250 ²
MW-6	7/28/98	<0.001	<0.001	<0.001	<0.001	43.0
MW-6	2/16/01	<0.005	<0.005	0.006	0.006	52
MW-6	6/12/02	<0.001	<0.001	<0.001	<0.001	54.1
MW-6	11/26/03	<0.001	<0.001	<0.001	<0.002	65
MW-6	6/6/03	<0.001	<0.001	<0.001	<0.001	43.7
MW-6	12/4/03	<0.001	<0.001	<0.001	<0.001	45.3
MW-6	7/2/04	<0.001	<0.001	<0.001	<0.001	57.5
MW-6	12/21/04	<0.005	<0.005	<0.005	<0.005	61.3
MW-6	6/6/05	<0.001	<0.001	<0.001	<0.001	66.7
MW-6	12/13/05	<0.005	<0.005	<0.005	<0.010	80.9
MW-6	6/27/06	<0.0005	<0.0005	<0.0005	<0.001	86.4
MW-6	12/19/06	<0.005	<0.005	<0.005	<0.001	88
MW-6	3/16/07	<0.0005	<0.0005	<0.0005	<0.001	92.2
MW-6	6/27/07	<0.0005	<0.0005	<0.0005	<0.001	110
MW-6	9/27/07	<0.0005	<0.0005	<0.0005	<0.001	99.5
MW-6	12/14/07	<0.0005	<0.0005	<0.0005	<0.001	99.2
MW-6	3/6/08	<0.00037	<0.00039	<0.00042	<0.00035	88.8
MW-6	6/4/08	<0.00037	<0.00039	<0.00042	<0.00035	117
MW-6	9/4/08	<0.00037	<0.00039	<0.00042	<0.00035	130
MW-6	11/14/08	<0.00037	<0.00039	<0.00042	<0.00035	130
MW-6	3/5/09	<0.00037	<0.00039	<0.00042	<0.00035	140
MW-6	6/16/09	<0.00037	<0.00039	<0.00042	<0.00035	160
MW-6	9/9/09	<0.00037	<0.00039	<0.00042	<0.00035	160
MW-6	11/20/09	<0.00037	<0.00039	<0.00042	<0.00035	140
MW-6	3/23/10	<0.0002	<0.0002	<0.0002	<0.0007	169
MW-6	7/1/10	<0.0002	<0.0002	<0.0002	<0.0007	161
DUP	7/1/10	<0.0002	<0.0002	<0.0002	<0.0007	169
MW-6	9/22/10	0.00033J	<0.0001	<0.0001	<0.0003	157
MW-6	11/9/10	<0.0001	<0.0001	0.0010	<0.0003	182
MW-6	3/3/11	<0.0001	<0.0001	<0.0001	<0.0003	225
MW-6	6/2/11	<0.0001	<0.0001	<0.0001	<0.0003	215
DUP	6/2/11	<0.0001	<0.0001	<0.0001	<0.0003	221
MW-6	9/27/11	<0.0001	<0.0001	<0.0001	<0.0003	222
MW-6	12/2/11	<0.0001	<0.0001	<0.0001	<0.0003	198
MW-6	3/7/12	<0.0001	<0.0001	<0.0001	<0.0001	189
MW-6	6/26/12	<0.0001	<0.0001	<0.0001	<0.0001	259
DUP	6/26/12	<0.0001	<0.0001	<0.0001	<0.0001	260
MW-6	9/20/12	<0.0001	<0.0001	<0.0001	<0.0001	221
MW-6	11/26/12	<0.0001	<0.0001	<0.0001	<0.0001	176
MW-6	3/14/13	<0.001	<0.002	<0.001	<0.001	195

Table 2
Cumulative Groundwater Analytical Data
Chevron Environmental Management Company
Former New Mexico "F" State Tank Battery
Lea County, New Mexico



Sample ID	Sample Date	Benzene	Toluene	Ethylbenzene	Total Xylenes	Chloride
New Mexico Water Quality Control Commission Groundwater Standard						
		0.005 ¹	1.0 ¹	0.7 ¹	0.62 ¹	250 ²
MW-6	6/14/13	<0.001	<0.002	<0.001	<0.001	219
MW-6	9/13/13	<0.001	<0.002	<0.001	<0.001	209
MW-6	11/27/13	<0.001	<0.002	<0.001	<0.001	220
MW-6	3/21/14	<0.001	<0.002	<0.001	<0.003	231
MW-6	8/1/14	<0.001	<0.002	<0.001	<0.003	220
MW-6	9/22/14	<0.001	<0.002	<0.001	<0.003	186
MW-6	12/12/14	<0.001	<0.002	<0.001	<0.003	217
MW-6	3/31/15	<0.001	<0.002	<0.001	<0.003	201
MW-6	6/9/15	<0.001	<0.002	<0.001	<0.003	209
MW-6	9/16/15	<0.001	<0.002	<0.001	<0.003	212
MW-6	12/9/15	<0.001	<0.002	<0.001	<0.003	175
MW-6	3/7/16	<0.001	<0.002	<0.001	<0.001	218
MW-6	6/21/16	<0.002	<0.002	<0.002	<0.002	201
MW-6	8/31/16	<0.002	<0.002	<0.002	<0.002	222
MW-6	12/8/16	<0.002	<0.002	<0.002	<0.002	190
MW-6	3/9/17	<0.002	<0.002	<0.002	<0.002	182
MW-6	6/14/17	<0.002	<0.002	<0.002	<0.002	168
MW-6	9/5/17	<0.002	<0.002	<0.002	<0.002	151
MW-6	11/29/17	<0.002	<0.002	<0.002	<0.002	124
MW-6	3/22/18	<0.002	<0.002	<0.002	<0.002	127
MW-6	6/14/18	<0.002	<0.002	<0.002	<0.002	110
MW-6	9/6/18	<0.002	<0.002	<0.002	<0.002	106
MW-6	12/14/18	<0.002	<0.002	<0.002	<0.002	78.7
MW-6	2/7/19	<0.002	<0.002	<0.002	<0.002	100.0
MW-6	5/6/19	<0.002	<0.002	<0.002	<0.002	108.0
MW-6	8/2/19	<0.002	<0.002	<0.002	<0.002	112.0
DUP	8/2/19	<0.002	<0.002	<0.002	<0.002	115.0
MW-6	11/19/19	<0.0010	<0.0010	<0.0010	<0.002	80.0
MW-7	7/28/98	<0.001	<0.001	<0.001	<0.001	82
MW-7	2/16/01	<0.005	<0.005	<0.005	<0.005	150
MW-7	6/12/02	<0.005	<0.005	<0.005	<0.005	96.7
MW-7	11/26/03	<0.001	<0.001	<0.001	<0.002	133
MW-7	6/6/03	<0.001	<0.001	<0.001	<0.001	199
MW-7	12/4/03	<0.001	<0.001	<0.001	<0.001	230
MW-7	7/2/04	<0.001	<0.001	<0.001	<0.001	215
MW-7	12/21/04	<0.005	<0.005	<0.005	<0.005	274
MW-7	6/6/05	<0.001	<0.001	<0.001	<0.001	221
MW-7	12/13/05	<0.005	<0.005	<0.005	<0.010	204
MW-7	6/27/06	<0.0005	<0.0005	<0.0005	<0.001	158
MW-7	12/19/06	<0.005	<0.005	<0.005	<0.001	130
MW-7	6/27/07	<0.0005	<0.0005	<0.0005	<0.001	110
MW-7	12/13/07	<0.0005	<0.0005	<0.0005	<0.001	135
MW-7	6/5/08	<0.00037	<0.00039	<0.00042	<0.00035	72.4

Table 2
Cumulative Groundwater Analytical Data
Chevron Environmental Management Company
Former New Mexico "F" State Tank Battery
Lea County, New Mexico



Sample ID	Sample Date	Benzene	Toluene	Ethylbenzene	Total Xylenes	Chloride
New Mexico Water Quality Control Commission Groundwater Standard						
		0.005 ¹	1.0 ¹	0.7 ¹	0.62 ¹	250 ²
MW-7	11/14/08	<0.00037	<0.00039	<0.00042	<0.00035	66
MW-7	6/16/09	<0.00037	<0.00039	<0.00042	<0.00035	58
MW-7	11/20/09	<0.00037	<0.00039	<0.00042	<0.00035	47
MW-7	7/1/10	<0.0002	<0.0002	<0.0002	<0.0007	51.2
MW-7	11/9/10	<0.0001	<0.0001	<0.0001	<0.0003	67.1
MW-7	6/2/11	<0.0001	<0.0001	<0.0001	<0.0003	69.4
MW-7	12/2/11	<0.0001	<0.0001	<0.0001	<0.0003	76.6
MW-7	6/26/12	<0.0001	<0.0001	<0.0001	<0.0001	91.5
MW-7	11/26/12	<0.0001	<0.0001	<0.0001	<0.0001	67.7
MW-7	6/14/13	<0.001	<0.002	<0.001	<0.001	56.4
MW-7	11/27/13	<0.001	<0.002	<0.001	<0.001	78.1
MW-7	8/1/14	<0.001	<0.002	<0.001	<0.003	68.3
MW-7	12/12/14	<0.001	<0.002	<0.001	<0.003	122
MW-7	6/9/15	<0.001	<0.002	<0.001	<0.003	79.2
MW-7	12/9/15	<0.001	<0.002	<0.001	<0.003	94
MW-7	6/21/16	<0.002	<0.002	<0.002	<0.002	52.3
MW-7	12/8/16	<0.002	<0.002	<0.002	<0.002	69.0
MW-7	6/14/17	<0.002	<0.002	<0.002	<0.002	68.6
MW-7	11/29/17	<0.002	<0.002	<0.002	<0.002	62.6
MW-7	6/14/18	<0.002	<0.002	<0.002	<0.002	58.5
MW-7	12/13/18	<0.002	<0.002	<0.002	<0.002	49.9
MW-7	5/6/19	<0.002	<0.002	<0.002	<0.002	58.7
MW-7	11/19/19	<0.0010	<0.0010	<0.0010	<0.002	50.0
MW-8	7/28/98	<0.001	<0.001	<0.001	<0.001	29
MW-8	2/16/01	<0.005	<0.005	<0.005	<0.005	94
MW-8	6/12/02	<0.005	<0.005	<0.005	<0.005	180
MW-8	11/26/03	<0.001	<0.001	<0.001	<0.002	239
MW-8	6/6/03	<0.001	<0.001	<0.001	<0.001	244
MW-8	12/4/03	<0.001	<0.001	<0.001	<0.001	251
MW-8	7/2/04	<0.005	<0.005	<0.005	<0.005	206
MW-8	12/21/04	<0.005	<0.005	<0.005	<0.005	244
MW-8	6/6/05	<0.0001	<0.0001	<0.0001	<0.0001	227
MW-8	12/13/05	<0.005	<0.005	<0.005	<0.010	144
MW-8	6/27/06	<0.0005	<0.0005	<0.0005	<0.001	92.6
MW-8	12/19/06	<0.005	<0.005	<0.005	<0.001	83.0
MW-8	6/27/07	<0.0005	<0.0005	<0.0005	<0.001	79
MW-8	12/13/07	<0.0005	<0.0005	<0.0005	<0.001	82.9
MW-8	6/4/08	<0.00037	<0.00039	<0.00042	<0.00035	54.9
MW-8	11/14/08	<0.00037	<0.00039	<0.00042	<0.00035	47
MW-8	6/16/09	<0.00037	<0.00039	<0.00042	<0.00035	45

Table 2
Cumulative Groundwater Analytical Data
Chevron Environmental Management Company
Former New Mexico "F" State Tank Battery
Lea County, New Mexico



Sample ID	Sample Date	Benzene	Toluene	Ethylbenzene	Total Xylenes	Chloride
New Mexico Water Quality Control Commission Groundwater Standard						
		0.005 ¹	1.0 ¹	0.7 ¹	0.62 ¹	250 ²
MW-8	11/20/09	<0.00037	<0.00039	<0.00042	<0.00035	36
MW-8	7/1/10	<0.0002	<0.0002	<0.0002	<0.0007	38.4
MW-8	11/9/10	<0.0001	<0.0001	<0.0001	<0.0003	47.6
MW-8	6/2/11	<0.0001	<0.0001	<0.0001	<0.0003	51.8
MW-8	12/2/11	<0.0001	<0.0001	<0.0001	<0.0003	72.7
MW-8	6/26/12	<0.0001	<0.0001	<0.0001	<0.0001	95.7
MW-8	11/26/12	<0.0001	<0.0001	<0.0001	<0.0001	77.6
MW-8	6/14/13	<0.001	<0.002	<0.001	<0.001	83.3
DUP	6/14/13	<0.001	<0.002	<0.001	<0.001	84.3
MW-8	11/27/13	<0.001	<0.002	<0.001	<0.001	72.2
DUP	11/27/13	<0.001	<0.002	<0.001	<0.001	71.3
MW-8	8/1/14	<0.001	<0.002	<0.001	<0.003	63.2
MW-8	12/12/14	<0.001	<0.002	<0.001	<0.003	82.8
MW-8	6/9/15	<0.0001	<0.0001	<0.0001	<0.0003	79.8
DUP	6/9/15	<0.0001	<0.0001	<0.0001	<0.0003	84.6
MW-8	12/9/15	<0.0001	<0.0001	<0.0001	<0.0003	69.9
DUP	12/9/15	<0.0001	<0.0001	<0.0001	<0.0003	68.0
MW-8	6/21/16	<0.002	<0.002	<0.002	<0.002	74.4
DUP	6/21/16	<0.002	<0.002	<0.002	<0.002	68.0
MW-8	12/8/16	<0.002	<0.002	<0.002	<0.002	71.4
DUP	12/8/16	<0.002	<0.002	<0.002	<0.002	72.2
MW-8	6/14/17	<0.002	<0.002	<0.002	<0.002	67.1
DUP	6/14/17	<0.002	<0.002	<0.002	<0.002	63.8
MW-8	11/29/17	<0.002	<0.002	<0.002	<0.002	58.7
MW-8	6/14/18	<0.002	<0.002	<0.002	<0.002	68.0
DUP	6/14/18	<0.002	<0.002	<0.002	<0.002	67.9
MW-8	12/13/18	<0.002	<0.002	<0.002	<0.002	62.6
DUP	12/13/18	<0.002	<0.002	<0.002	<0.002	61.5
MW-8	5/6/19	<0.002	<0.002	<0.002	<0.002	102.0
MW-8	11/19/19	<0.0010	<0.0010	<0.0010	<0.002	65.0
MW-9R	6/9/15	<0.0001	<0.0001	<0.0001	<0.0003	145
MW-9R	12/9/15	<0.0001	<0.0001	<0.0001	<0.0003	119
MW-9R	6/21/16	<0.002	<0.002	<0.002	<0.002	109
MW-9R	12/8/16	<0.002	<0.002	<0.002	<0.002	120
MW-9R	6/14/17	<0.002	<0.002	<0.002	<0.002	115
MW-9R	11/29/17	<0.002	<0.002	<0.002	<0.002	98
MW-9R	6/15/18	<0.002	<0.002	<0.002	<0.002	92.2
MW-9R	12/13/18	<0.002	<0.002	<0.002	<0.002	84.0
MW-9R	5/6/19	<0.002	<0.002	<0.002	<0.002	94.1
MW-9R	11/19/19	<0.0010	<0.0010	<0.0010	<0.002	110.0

Table 2
Cumulative Groundwater Analytical Data
Chevron Environmental Management Company
Former New Mexico "F" State Tank Battery
Lea County, New Mexico



Sample ID	Sample Date	Benzene	Toluene	Ethylbenzene	Total Xylenes	Chloride
New Mexico Water Quality Control Commission Groundwater Standard						
		0.005 ¹	1.0 ¹	0.7 ¹	0.62 ¹	250 ²
WW-1	7/28/98	<0.001	<0.001	<0.001	<0.001	100
WW-1	6/12/02	<0.001	<0.001	<0.001	<0.001	43.6
WW-1	11/26/02	<0.001	<0.001	<0.001	<0.002	80
WW-1	6/6/03	<0.001	<0.001	<0.001	<0.001	73.4
WW-1	12/4/03	<0.001	<0.001	<0.001	<0.001	65.3
WW-1	7/2/04	<0.001	<0.001	<0.001	<0.001	66.5
WW-1	12/21/04	<0.005	<0.005	<0.005	<0.005	74.3
WW-1	6/6/05	<0.0001	<0.0001	<0.0001	<0.0001	63.4
WW-1	12/13/05	<0.005	<0.005	<0.005	<0.010	41.1
WW-1	6/27/06	<0.0005	<0.0005	<0.0005	<0.001	50
WW-1	12/19/06	<0.005	<0.005	<0.005	<0.001	80.0
WW-1	6/27/07	<0.0005	<0.0005	<0.0005	<0.001	52
WW-1	12/14/07	<0.0005	<0.0005	<0.0005	<0.001	59.8
WW-1	6/4/08	<0.00037	<0.00039	<0.00042	<0.00035	64.1
DUP	6/4/08	<0.00037	<0.00039	<0.00042	<0.00035	64.4
WW-1	11/14/08	<0.00037	<0.00039	<0.00042	<0.00035	73
WW-1	6/17/09	<0.00037	<0.00039	<0.00042	<0.00035	60
WW-1	11/20/09	<0.00037	<0.00039	<0.00042	<0.00035	64
WW-1	7/1/10	<0.0002	<0.0002	<0.0002	<0.0007	41
WW-1	11/9/10	<0.0001	<0.0001	<0.0001	<0.0003	77
WW-1	6/2/11	<0.0001	<0.0001	<0.0001	<0.0003	73.6
WW-1	12/2/11	<0.0001	<0.0001	<0.0001	<0.0003	50.2
WW-1	6/26/12	<0.0001	<0.0001	<0.0001	<0.0001	90
WW-1	11/26/12	<0.0001	<0.0001	<0.0001	<0.0001	69.9
WW-1	6/14/13	<0.001	<0.002	<0.001	<0.001	53.7
WW-1	11/27/13	----- not sampled -----				
WW-1	8/1/14	<0.001	<0.002	<0.001	<0.003	56.4
WW-1	12/12/14	<0.001	<0.002	<0.001	<0.003	71.6
WW-1	6/9/15	<0.0001	<0.0001	<0.0001	<0.0003	64.8
WW-1	12/9/15	<0.0001	<0.0001	<0.0001	<0.0003	45
WW-1	6/21/16	<0.002	<0.002	<0.002	<0.002	37.0
WW-1	12/8/16	<0.002	<0.002	<0.002	<0.002	42.1
WW-1	6/14/17	<0.002	<0.002	<0.002	<0.002	34.0
WW-1	11/29/17	<0.002	0.0559	0.225	0.0411	49.4
DUP	11/29/17	<0.002	0.059	0.241	0.0456	49.0
WW-1	12/21/17	<0.002	<0.002	<0.002	<0.002	--
WW-1	6/15/18	<0.002	<0.002	<0.002	<0.002	42.6
WW-1	12/18/18	<0.002	<0.002	<0.002	<0.002	45.3
WW-1	5/6/19	<0.002	<0.002	<0.002	<0.002	60.4
DUP	5/6/19	<0.002	<0.002	<0.002	<0.002	55.5

Table 2
Cumulative Groundwater Analytical Data
Chevron Environmental Management Company
Former New Mexico "F" State Tank Battery
Lea County, New Mexico



Sample ID	Sample Date	Benzene	Toluene	Ethylbenzene	Total Xylenes	Chloride
New Mexico Water Quality Control Commission Groundwater Standard						
		0.005 ¹	1.0 ¹	0.7 ¹	0.62 ¹	250 ²
WW-2	6/12/02	<0.001	<0.001	<0.001	<0.001	53.7
WW-2	11/26/02	<0.001	<0.001	<0.001	<0.002	70.9
WW-2	6/6/03	<0.001	<0.001	<0.001	<0.001	71.1
WW-2	12/4/03	<0.001	<0.001	<0.001	<0.001	52.4
WW-2	7/2/04	<0.001	<0.001	<0.001	<0.001	51.0
WW-2	12/21/04	<0.005	<0.005	<0.005	<0.005	55.6
WW-2	6/6/05	<0.001	<0.001	<0.001	<0.001	55.3
WW-2	12/13/05	<0.005	<0.005	<0.005	<0.010	75.3
WW-2	6/27/06	<0.0005	<0.0005	<0.0005	<0.001	69.7
WW-2	12/19/06	<0.005	<0.005	<0.005	<0.001	57.0
WW-2	6/27/07	<0.0005	<0.0005	<0.0005	<0.001	46
WW-2	12/14/07	<0.0005	<0.0005	<0.0005	<0.001	83.1
WW-2	6/4/08	<0.00037	<0.00039	<0.00042	<0.00035	65.9
WW-2	11/14/08	<0.00037	<0.00039	<0.00042	<0.00035	73
WW-2	6/17/09	<0.00037	<0.00039	<0.00042	<0.00035	60
WW-2	11/20/09	----- not sampled -----				
WW-2	7/1/10	<0.0002	<0.0002	<0.0002	<0.0007	66.3
WW-2	11/9/10	<0.0001	<0.0001	<0.0001	<0.0003	77.2
WW-2	6/2/11	<0.0001	<0.0001	<0.0001	<0.0003	74.9
WW-2	12/2/11	<0.0001	<0.0001	<0.0001	<0.0003	76.5
WW-2	6/26/12	<0.0001	<0.0001	<0.0001	<0.0001	63.1
WW-2	11/26/12	<0.0001	<0.0001	<0.0001	<0.0001	50.3
WW-2	6/14/13	<0.001	<0.002	<0.001	<0.001	81.1
WW-2	11/27/13	----- not sampled -----				
WW-2	8/1/14	<0.001	<0.002	<0.001	<0.003	95.5
WW-2	12/12/14	<0.001	<0.002	<0.001	<0.003	112
WW-2	6/9/15	<0.001	<0.002	<0.001	<0.003	108
WW-2	12/9/15	<0.001	<0.002	<0.001	<0.003	45.8
WW-2	6/21/16	<0.002	<0.002	<0.002	<0.002	28.9
WW-2	12/8/16	<0.002	<0.002	<0.002	<0.002	39.1
WW-2	6/14/17	<0.002	<0.002	<0.002	<0.002	29.8
WW-2	11/29/17	<0.002	<0.002	<0.002	<0.002	39.8
WW-2	6/13/18	----- not sampled -----				
WW-2	12/14/18	<0.002	0.00715	<0.0020	0.0828	45.9
WW-2	2/7/19	<0.002	<0.002	<0.002	<0.002	41.5
WW-2	5/6/19	<0.002	<0.002	<0.002	<0.002	97.5
RW-1	6/5/08	0.0119	<0.0039	<0.0042	<0.0035	36.2
RW-1	6/17/09	0.012	0.0055	0.0018	0.012	49
RW-1	7/1/10	0.022	0.00070J	0.0027	0.017	41.1
RW-1	6/26/12	0.0113	<0.00100	0.00514	0.0350	44.1
RW-1	6/27/13	0.00745	0.00963	0.0101	0.0549	33.8
RW-1	8/1/14	0.0172	0.00226	0.00499	0.0237	36.2

Table 2- WP Cumulative Summary of Groundwater Analytical Results

Table 2
Cumulative Groundwater Analytical Data
Chevron Environmental Management Company
Former New Mexico "F" State Tank Battery
Lea County, New Mexico



Sample ID	Sample Date	Benzene	Toluene	Ethylbenzene	Total Xylenes	Chloride
New Mexico Water Quality Control Commission Groundwater Standard						
		0.005¹	1.0¹	0.7¹	0.62¹	250²
RW-1	6/9/15	0.0109	<0.00200	0.00373	0.0182	43.7
RW-1	12/9/15	----- not sampled -----				
RW-1	6/21/16	----- not sampled -----				
RW-1	12/8/16	0.0137	<0.002	<0.002	0.0089	74.9
RW-1	6/14/17	----- not sampled -----				
RW-1	11/29/17	0.0148	<0.002	0.00372	0.0108	101
RW-1	6/14/18	----- not sampled -----				
RW-1	12/14/18	<0.002	0.00363	<0.002	0.0137	131
RW-2	6/27/07	0.00287	<0.0025	<0.0025	0.0303	60
RW-2	6/5/08	<0.0037	<0.0039	<0.0042	<0.0035	51.1
RW-2	6/17/09	<0.00037	0.0046	<0.00042	0.016	44
RW-2	7/1/10	0.0016	<0.0002	<0.0002	0.0067	30.1
RW-2	6/26/12	<0.00100	<0.001	<0.001	0.00362	43.9
RW-2	6/14/13	0.00178	0.00268	0.00171	0.0262	30
RW-2	8/1/14	0.00103	0.00106	<0.001	0.00788	41
RW-2	12/12/14	0.00154	<0.002	<0.001	0.00348	52.7
RW-2	6/9/15	0.00112	<0.002	<0.001	<0.003	49.5
RW-2	12/9/15	<0.00100	<0.002	0.00102	0.00725	48
RW-2	6/21/16	<0.002	<0.002	<0.002	<0.002	44
RW-2	12/8/16	<0.002	<0.002	<0.002	<0.002	55.8
RW-2	6/14/17	0.00408	0.00219	<0.002	<0.002	62.3
RW-2	11/29/17	<0.002	<0.002	<0.002	<0.002	65.0
RW-2	6/15/18	0.00306	<0.002	<0.002	<0.002	72.4
RW-2	12/14/18	<0.002	<0.002	<0.002	0.00215	73.4
RW-3	6/11/02	<0.005	<0.005	<0.005	<0.005	25.9
RW-3	12/3/04	<0.001	<0.001	<0.001	<0.001	36.6
RW-3	6/27/07	0.00855	<0.0025	0.0122	0.027	130
RW-3	6/5/08	<0.0037	<0.0039	<0.0042	0.0129	90.6
RW-3	6/17/09	0.0052	0.0042	0.011	0.025	74
RW-3	11/20/09	<0.00037	0.001	0.0027	0.0076	60
DUP	11/20/09	<0.00037	0.0013	0.003	0.008	60
RW-3	7/1/10	0.0065	<0.0002	0.0066	0.003	68.3
RW-3	6/26/12	0.00682	<0.001	<0.001	<0.001	55.4
RW-3	6/14/13	0.0092	0.0291	0.0253	0.138	37.3
RW-3	8/1/14	0.00709	<0.002	<0.001	0.132	41.5
RW-3	12/12/14	0.00588	<0.002	<0.001	0.00691	47.7
RW-3	6/9/15	0.00512	<0.002	<0.001	0.00309	40
RW-3	12/9/15	0.00432	<0.002	<0.001	<0.003	39
RW-3	6/21/16	0.00408	<0.002	<0.002	<0.002	36.3
RW-3	12/8/16	0.00574	<0.002	<0.002	0.00265	45.3
RW-3	6/14/17	0.00850	<0.002	<0.002	<0.002	43.4
RW-3	11/29/17	0.00563	<0.002	<0.002	<0.002	49.1
RW-3	6/15/18	<0.002	<0.002	<0.002	<0.002	53.1
RW-3	12/14/18	0.00262	<0.002	<0.002	0.00322	55.4

Table 2- WP Cumulative Summary of Groundwater Analytical Results

Table 2
Cumulative Groundwater Analytical Data
Chevron Environmental Management Company
Former New Mexico "F" State Tank Battery
Lea County, New Mexico



Sample ID	Sample Date	Benzene	Toluene	Ethylbenzene	Total Xylenes	Chloride
New Mexico Water Quality Control Commission Groundwater Standard						
		0.005¹	1.0¹	0.7¹	0.62¹	250²
RW-4	6/26/12	0.00221	<0.001	0.00410	0.0188	65.1
RW-4	6/27/13	0.0245	0.0396	0.0779	0.196	43.1
RW-4	8/1/14	0.0155	0.00107	0.00766	0.0286	34.2
RW-4	6/9/15	0.0127	<0.002	0.00752	0.030	39.5
RW-4	12/9/15	----- not sampled -----				
RW-4	6/21/16	----- not sampled -----				
RW-4	12/8/16	0.0139	<0.002	0.00758	0.03070	45.7
RW-4	6/14/17	----- not sampled -----				
RW-4	11/29/17	0.0268	0.00761	0.03040	0.1310	48.9
RW-4	6/14/18	----- not sampled -----				
RW-4	12/14/18	107	390	47.6	252	<5.0

Notes:

Results shown in mg/L.

Data through June 6, 2005 provided by Larson & Associates, Inc.

Bold indicates detection above method detection limit.

Shaded cells indicate New Mexico Water Quality Control Commission (NMWQCC) exceedance.

¹Human Health Standards for Groundwater.

²Other Standards for Domestic Water Supply.

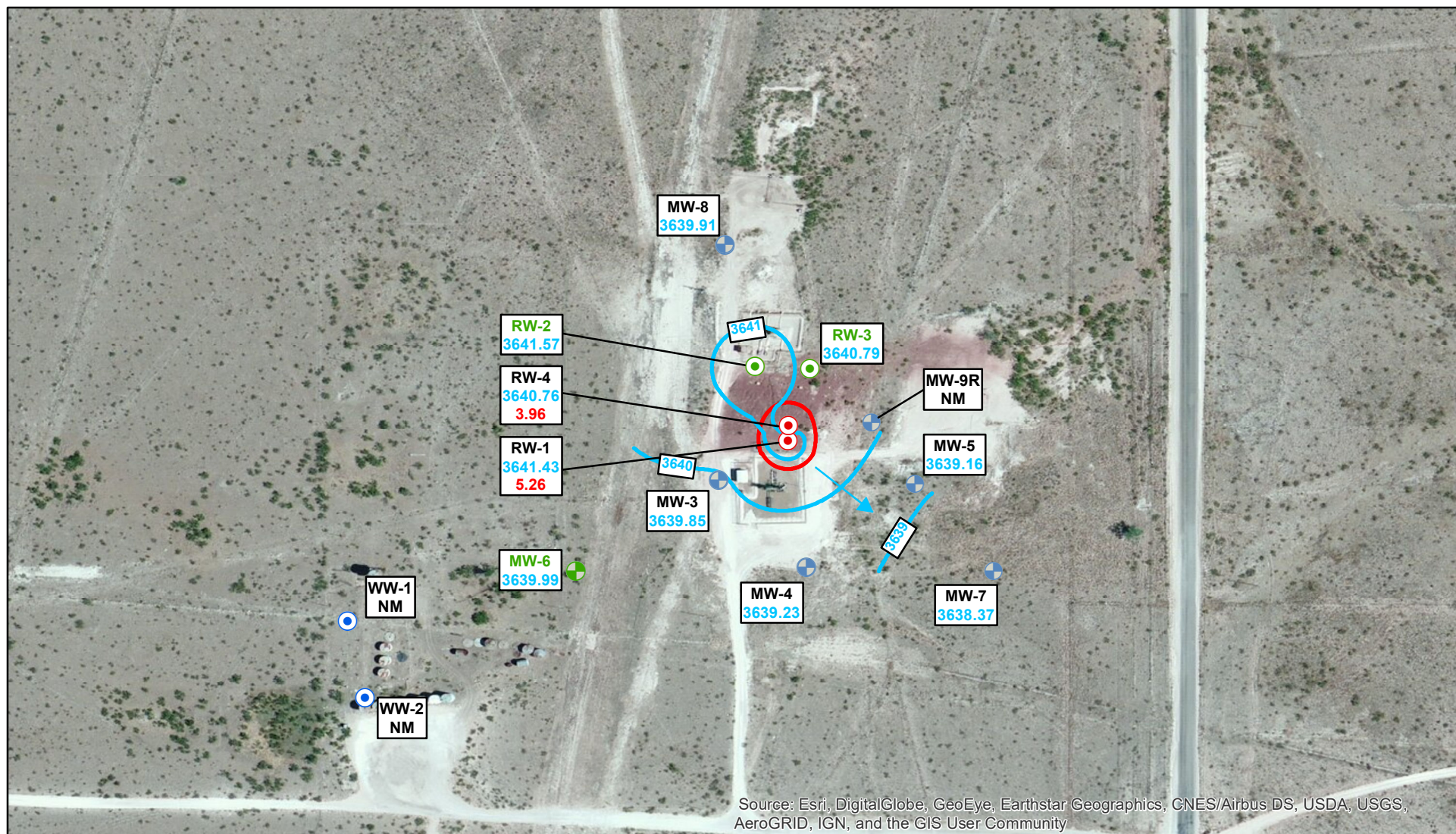
³RW-1 and RW-4 were sampled by dropping a disposable PVC bailer below the level of LNAPL.

⁴MW-9R was installed May 19, 2015.

⁵ Sample was analyzed as a solid instead of a water due to oily nature of sample and results are in mg/kg.

FIGURES



**Legend**

- | | | | |
|--|---|--|---|
| | Monitoring Well Location | | Monitoring Well Location Sampled During Reduced Event |
| | Recovery Well Location | | Recovery Well Location Sampled During Reduced Event |
| | Water Well Location | | |
| | Potentiometric Contour and Elevation | | |
| | Inferred Potentiometric Contour | | |
| | Groundwater Elevation (ft above mean sea level) | | |
| | Approximate Groundwater Flow | | |
| | Approximate LNAPL Contour | | LNAPL Thickness (ft) |

Notes:

1. Datum: D_WGS_1984
2. Site Location: 32.643018, -103.301158
3. NM: Not Measured
4. RW-1 was omitted when developing potentiometric surface for Quarter 1 2019
5. Monitoring wells and recovery wells in green are proposed to be sampled during the reduced sampling event (one semi-annual event)

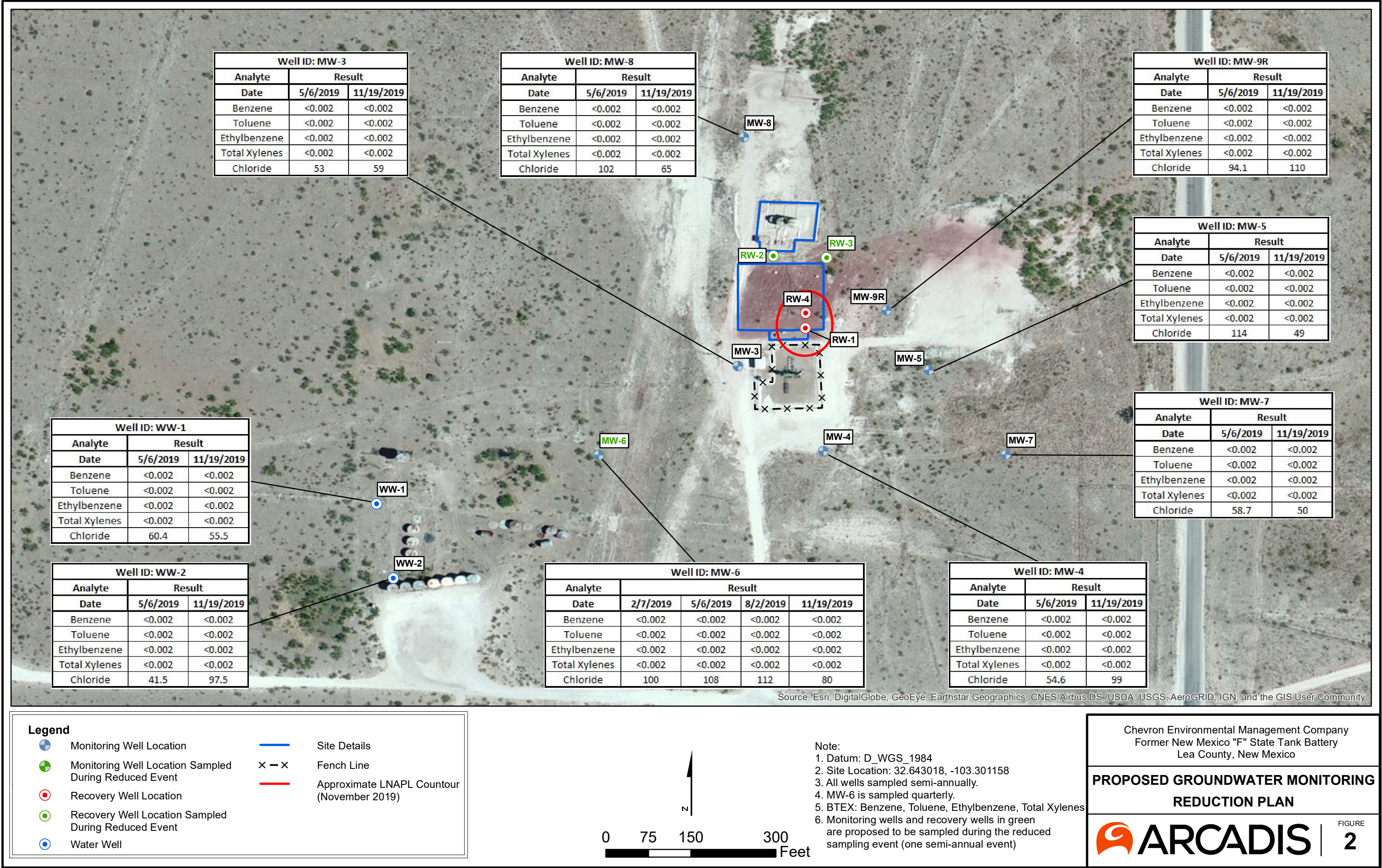
0 125 250 500 Feet

Chevron Environmental Management Company
Former New Mexico "F" State Tank Battery
Lea County, New Mexico

POTENTIOMETRIC SURFACE MAP NOVEMBER 2019

ARCADIS | FIGURE 1

Document Path: \\arcadis-us\office\data\Houston-TX\ENV\Chevron\Texaco TX\HES Transfer\F-State\GIS - F-State



Appendix C

Field Methodology and Documentation



FIELD METHODS

Field equipment was decontaminated with an Alconox™ wash and distilled water rinse before beginning field activities and between wells. Groundwater gauging was conducted prior to sampling activities.

Prior to sampling, static fluid water levels were measured with an electronic interface probe to the nearest hundredth of a foot and recorded. In addition, a conductivity probe was used to record the conductivity levels every 2 feet in each well to evaluate the vertical distribution of chloride-affected groundwater. After recording conductivity levels, discrete samples were collected at the interval of highest conductivity using a Hydrasleeve™. Geochemical water quality parameters (pH, temperature, and conductivity) were recorded at the sampling depth. All non-disposable groundwater sampling equipment was thoroughly decontaminated between measurements to prevent possible cross-contamination between wells. Laboratory-supplied sample containers were filled directly from the Hydrasleeve™.

Groundwater samples were placed on ice in insulated coolers and chilled to a temperature of approximately 4°C (40°F). Groundwater samples were submitted by Arcadis under chain-of-custody (COC) protocol to Pace Analytical for analysis of BTEX by Environmental Protection Agency (EPA) Method 8021B and chloride by Method 300.

Appendix D

Cumulative Summary of Groundwater Potentiometric Elevation Data

Appendix D
Cumulative Groundwater Gauging Data
Chevron Environmental Management Company
Former New Mexico "F" State Tank Battery
Lea County, New Mexico



Well ID <i>toc elevation</i>	Date	Depth to Groundwater (ft toc ²)	Depth to LNAPL (ft toc ²)	LNAPL Thickness (ft)	Groundwater Elevation (ft msl ²)	Total Well Depth (ft toc ²)	Well Diameter (inches)	Well Screen Interval (ft bgs ⁴)
MW-3 3696.85	7/28/98	59.53	---	---	3637.32	70.15	2.00	55 - 75
	6/25/99	59.06	---	---	3637.79	---		
	2/16/01	59.53	---	---	3637.32	---		
	6/11/02	59.18	---	---	3637.67	---		
	11/26/02	59.54	---	---	3637.31	---		
	6/5/03	59.45	---	---	3637.40	---		
	12/3/03	59.47	---	---	3637.38	---		
	7/1/04	59.24	---	---	3637.61	---		
	12/20/04	58.83	---	---	3638.02	---		
	6/6/05	58.53	---	---	3638.32	---		
	12/12/05	57.83	---	---	3639.02	---		
	1/25/06	57.85	---	---	3639.00	---		
	5/1/06	57.59	---	---	3639.26	---		
	6/26/06	57.66	---	---	3639.19	---		
	12/18/06	57.54	---	---	3639.31	---		
	3/16/07	57.43	---	---	3639.42	---		
	6/26/07	57.31	---	---	3639.54	---		
	9/27/07	57.89	---	---	3638.96	---		
	12/13/07	57.61	---	---	3639.24	---		
	3/6/08	57.70	---	---	3639.15	---		
	6/4/08	57.33	---	---	3639.52	---		
	9/4/08	57.45	---	---	3639.40	---		
	11/13/08	57.26	---	---	3639.59	---		
	3/5/09	57.65	---	---	3639.20	---		
	6/15/09	57.40	---	---	3639.45	---		
	9/9/09	57.64	---	---	3639.21	---		
	11/19/09	57.59	---	---	3639.26	---		
	3/23/10	57.60	---	---	3639.25	---		
	6/29/10	58.34	---	---	3638.51	---		
	9/22/10	58.35	---	---	3638.50	---		
	11/8/10	57.61	---	---	3639.24	---		
	6/2/11	57.49	---	---	3639.36	---		
	12/1/11	58.42	---	---	3638.43	---		
	3/7/12	57.92	---	---	3638.93	---		
	6/26/12	57.89	---	---	3638.96	---		
	9/20/12	58.14	---	---	3638.71	---		
	11/26/12	58.15	---	---	3638.70	---		
	3/14/13	58.10	---	---	3638.75	---		
	6/14/13	58.64	58.63	0.01	3638.22	---		
	9/13/13	58.48	---	---	3638.37	---		
	11/20/13	58.02	---	---	3638.83	---		

Appendix D
Cumulative Groundwater Gauging Data
Chevron Environmental Management Company
Former New Mexico "F" State Tank Battery
Lea County, New Mexico



Well ID <i>toc elevation</i>	Date	Depth to Groundwater (ft toc ²)	Depth to LNAPL (ft toc ²)	LNAPL Thickness (ft)	Groundwater Elevation (ft msl ²)	Total Well Depth (ft toc ²)	Well Diameter (inches)	Well Screen Interval (ft bgs ⁴)
MW-3 Cont.	3/20/14	57.89	---	---	3638.96	68.09		
	7/31/14	57.88	---	---	3638.97	67.97		
	9/22/14				not gauged			
	12/12/14	57.46	---	---	3639.39	---		
	3/31/15				not gauged			
	6/9/15	57.22	---	---	3639.63	67.75		
	9/16/15	56.97	---	---	3639.88	67.97		
	12/9/15	56.57	---	---	3640.28	67.92		
	3/7/16	56.50	---	---	3640.35	67.89		
	6/21/16	56.51	---	---	3640.34	67.92		
	8/31/16	56.82	---	---	3640.03	67.88		
	12/8/16	56.54	---	---	3640.31	67.94		
	3/9/17	56.27	---	---	3640.58	---		
	6/13/17	56.22	---	---	3640.63	67.87		
	9/5/17	56.40	---	---	3640.45	---		
	11/28/17	56.30	---	---	3640.55	---		
	3/22/18	56.25	---	---	3640.60	---		
	6/14/18	52.23	---	---	3644.62	67.79		
	9/6/18	56.45	---	---	3640.40	67.71		
	12/13/18	56.54	---	---	3640.31	67.81		
	2/7/19	56.72	---	---	3640.13	67.78		
	5/2/19	56.91	---	---	3639.94	67.70		
	8/1/19	56.88	---	---	3639.97	67.66		
	11/18/19	57.00	---	---	3639.85	69.65		
	3/26/20	57.15	---	---	3639.70	67.65		
	6/22/20	57.40	---	---	3639.45	67.87		
	8/20/20	57.39	---	---	3639.46	---		
	3/16/21	57.57	---	---	3639.28	---		
	5/18/21	57.69	---	---	3639.16	67.76		
	7/19/21	57.84	---	---	3639.01	---		
	11/4/21	57.93	---	---	3638.92	---		
	3/8/22	57.83	---	---	3639.02	67.83		
	6/8/22	58.09	---	---	3638.76	---		
	8/15/22	58.05	---	---	3638.80	65.93		
	11/18/22	58.22	---	---	3638.63	67.70		
MW-4 3699.50 ft	7/28/98	69.72	---	---	3629.78	68.74	2.00	55 - 75
	6/25/99	62.31	---	---	3637.19	---		
	2/16/01	62.52	---	---	3636.98	---		
	6/11/02	62.39	---	---	3637.11	---		
	11/26/02	62.76	---	---	3636.74	---		
	6/5/03	62.71	---	---	3636.79	---		
	12/3/03	62.67	---	---	3636.83	---		
	7/1/04	62.43	---	---	3637.07	---		
	12/20/04	62.02	---	---	3637.48	---		
	6/6/05	61.67	---	---	3637.83	---		
	12/12/05	61.11	---	---	3638.39	---		
	1/25/06	61.11	---	---	3638.39	---		
	5/1/06	60.89	---	---	3638.61	---		
	6/26/06	60.93	---	---	3638.57	---		
	12/18/06	60.79	---	---	3638.71	---		
	3/16/07	60.72	---	---	3638.78	---		
	6/26/07	60.60	---	---	3638.90	---		
	9/27/07	61.02	---	---	3638.48	---		
	12/13/07	60.88	---	---	3638.62	---		
	3/6/08	60.96	---	---	3638.54	---		

Appendix D
Cumulative Groundwater Gauging Data
Chevron Environmental Management Company
Former New Mexico "F" State Tank Battery
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Well ID	Date	Depth to Groundwater	Depth to LNAPL	LNAPL Thickness	Groundwater Elevation	Total Well Depth	Well Diameter	Well Screen Interval
<i>loc elevation</i>		(ft toc ²)	(ft toc ²)	(ft)	(ft msl ²)	(ft toc ²)	(inches)	(ft bgs ⁴)
MW-4 Cont.	6/4/08	60.65	---	---	3638.85	---		
	9/4/08	60.75	---	---	3638.75	---		
	11/13/08	60.61	---	---	3638.89	---		
	3/5/09	60.75	---	---	3638.75	---		
	6/15/09	60.70	---	---	3638.80	---		
	9/9/09	60.89	---	---	3638.61	---		
	11/19/09	60.83	---	---	3638.67	---		
	3/23/10	60.91	---	---	3638.59	---		
	6/29/10	61.54	---	---	3637.96	---		
	9/22/10	61.53	---	---	3637.97	---		
	11/8/10	60.96	---	---	3638.54	---		
	6/2/11	60.85	---	---	3638.65	---		
	12/1/11	61.63	---	---	3637.87	---		
	3/7/12	61.16	---	---	3638.34	---		
	6/26/12	61.16	---	---	3638.34	---		
	9/20/12	61.33	---	---	3638.17	---		
	11/26/12	61.40	---	---	3638.10	---		
	3/14/13	61.75	---	---	3637.75	---		
	6/14/13	61.80	---	---	3637.70	---		
	9/13/13	61.70	---	---	3637.80	---		
	11/20/13	61.18	---	---	3638.32	---		
	3/20/14	61.99	---	---	3637.51	63.65		
	7/31/14	61.03	---	---	3638.47	63.60		
	9/22/14				not gauged			
	12/12/14	60.71		---	3638.79	---		
	3/31/15				not gauged			
	6/9/15	60.47	---	---	3639.03	63.63		
	9/16/15	60.29	---	---	3639.21	63.65		
	12/9/15	59.93	---	---	3639.57	---		
	3/7/16	59.82	---	---	3639.68	63.65		
	6/21/16	59.83	---	---	3639.67	63.67		
	8/31/16	60.14	---	---	3639.36	63.66		
	12/8/16	59.88	---	---	3639.62	63.67		
	3/9/17	59.60	---	---	3639.90	---		
	6/13/17	59.55	---	---	3639.95	63.62		
	9/5/17	59.70	---	---	3639.80	---		
	11/28/17	59.60	---	---	3639.90	---		
	3/22/18	59.61	---	---	3639.89	---		
	6/14/18	59.61	---	---	3639.89	63.71		
	9/6/18	59.80	---	---	3639.70	63.70		
	12/13/18	59.96	---	---	3639.54	63.61		
	2/7/19	60.03	---	---	3639.47	63.66		
	5/2/19	60.18	---	---	3639.32	63.68		
	8/1/19	60.14	---	---	3639.36	63.66		
	11/18/19	60.27	---	---	3639.23	64.81		
	3/26/20	60.48	---	---	3639.02	63.69		
	6/22/20	60.61	---	---	3638.89	63.81		
	8/20/20	60.69	---	---	3638.81	---		
	3/16/21	60.83	---	---	3638.67	---		
	5/18/21	60.98	---	---	3638.52	63.74		
	7/19/21	61.11	---	---	3638.39	---		
	11/4/21	61.19	---	---	3638.31	---		
	3/8/22	61.13	---	---	3638.37	63.74		
	6/8/22	61.35	---	---	3638.15	63.74		
	8/15/22	61.32	---	---	3638.18	63.73		
	11/18/22	61.48	---	---	3638.02	63.74		

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Well ID <i>toc elevation</i>	Date	Depth to Groundwater (ft toc ²)	Depth to LNAPL (ft toc ²)	LNAPL Thickness (ft)	Groundwater Elevation (ft msl ²)	Total Well Depth (ft toc ²)	Well Diameter (inches)	Well Screen Interval (ft bgs ⁴)
MW-5 3693.52	7/28/98	56.53	---	---	3636.99	66.80	2.00	48 - 68
	3/23/99	56.30	---	---	3637.22	---		
	6/25/99	56.21	---	---	3637.31	---		
	2/16/01	56.31	---	---	3637.21	---		
	6/11/02	56.29	---	---	3637.23	---		
	11/26/02	56.13	---	---	3637.39	---		
	6/5/03	56.53	---	---	3636.99	---		
	12/3/03	56.57	---	---	3636.95	---		
	7/1/04	54.34	---	---	3639.18	---		
	12/20/04	55.86	---	---	3637.66	---		
	6/6/05	55.60	---	---	3637.92	---		
	12/12/05	55.04	---	---	3638.48	---		
	1/25/06	55.07	---	---	3638.45	---		
	5/1/06	54.87	---	---	3638.65	---		
	6/26/06	54.86	---	---	3638.66	---		
	12/18/06	54.61	---	---	3638.91	---		
	3/16/07	54.51	---	---	3639.01	---		
	6/26/07	54.49	---	---	3639.03	---		
	9/27/07	54.84	---	---	3638.68	---		
	12/13/07	54.74	---	---	3638.78	---		
	3/6/08	54.77	---	---	3638.75	---		
	6/4/08	54.58	---	---	3638.94	---		
	9/4/08	54.68	---	---	3638.84	---		
	11/13/08	54.57	---	---	3638.95	---		
	3/5/09	54.70	---	---	3638.82	---		
	6/15/09	54.69	---	---	3638.83	---		
	9/9/09	54.86	---	---	3638.66	---		
	11/19/09	54.81	---	---	3638.71	---		
	3/23/10	54.80	---	---	3638.72	---		
	6/29/10	55.38	---	---	3638.14	---		
	9/22/10	55.40	---	---	3638.12	---		
	11/8/10	54.84	---	---	3638.68	---		
	6/2/11	55.79	---	---	3637.73	---		
	12/1/11	55.49	---	---	3638.03	---		
	3/7/12	54.14	---	---	3639.38	---		
	6/26/12	55.14	---	---	3638.38	---		
	9/20/12	55.28	---	---	3638.24	---		
	11/26/12	55.37	---	---	3638.15	---		
	3/14/13	55.30	---	---	3638.22	---		
	6/14/13	55.60	---	---	3637.92	---		
	9/13/13	55.54	---	---	3637.98	---		

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Cumulative Groundwater Gauging Data
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Former New Mexico "F" State Tank Battery
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Well ID <i>toc elevation</i>	Date	Depth to Groundwater (ft toc ²)	Depth to LNAPL (ft toc ²)	LNAPL Thickness (ft)	Groundwater Elevation (ft msl ²)	Total Well Depth (ft toc ²)	Well Diameter (inches)	Well Screen Interval (ft bgs ⁴)
MW-5 Cont.	11/20/13	55.34	---	---	3638.18	---		
	3/20/14	55.02	---	---	3638.50	65.04		
	7/31/14	54.92	---	---	3638.60	64.93		
	9/22/14				not gauged			
	12/12/14	54.58	---	---	3638.94	---		
	3/31/15				not gauged			
	6/9/15	54.32	---	---	3639.20	64.86		
	9/16/15	54.22	---	---	3639.30	64.91		
	12/9/15	53.94	---	---	3639.58	64.85		
	3/7/16	53.85	---	---	3639.67	64.85		
	6/21/16	53.86	---	---	3639.66	64.80		
	8/31/16	54.10	---	---	3639.42	64.83		
	12/8/16	53.79	---	---	3639.73	64.80		
	3/9/17	53.71	---	---	3639.81	---		
	6/13/17	53.60	---	---	3639.92	64.80		
	9/5/17	53.75	---	---	3639.77	---		
	11/28/17	53.69	---	---	3639.83	---		
	3/22/18	53.65	---	---	3639.87	---		
	6/14/18	52.63	---	---	3640.89	55.83		
	9/6/18	53.80	---	---	3639.72	64.78		
	12/13/18	53.81	---	---	3639.71	64.73		
	2/7/19	53.95	---	---	3639.57	64.70		
	5/2/19	54.12	---	---	3639.40	64.70		
	8/1/19	54.14	---	---	3639.38	64.70		
	11/18/19	54.36	---	---	3639.16	65.85		
	3/26/20	54.55	---	---	3638.97	64.71		
	6/22/20	54.64	---	---	3638.88	64.81		
	8/20/20	55.76	---	---	3637.76	---		
	3/16/21	54.90	---	---	3638.62	---		
	5/18/21	55.56	---	---	3637.96	---		
	7/19/21	55.15	---	---	3638.37	---		
	11/4/21	55.21	---	---	3638.31	---		
	3/8/22	55.22	---	---	3638.30	64.83		
	6/8/22	55.40	---	---	3638.12	---		
	8/15/22	33.06	---	---	3660.46	64.79		
	11/18/22	55.54	---	---	3637.98	64.82		
MW-6 3704.81	7/28/98	67.86	---	---	3636.95	78.25	2.00	56 - 76
	6/25/99	67.25	---	---	3637.56	---		
	2/16/01	67.45	---	---	3637.36	---		
	6/11/02	67.19	---	---	3637.62	---		
	11/26/02	67.09	---	---	3637.72	---		
	6/5/03	67.57	---	---	3637.24	---		
	12/3/03	67.61	---	---	3637.20	---		
	7/1/04	67.43	---	---	3637.38	---		
	12/20/04	67.55	---	---	3637.26	---		
	6/6/05	66.41	---	---	3638.40	---		
	12/12/05	65.80	---	---	3639.01	---		
	1/25/06	65.88	---	---	3638.93	---		
	5/1/06	65.57	---	---	3639.24	---		
	6/26/06	65.82	---	---	3638.99	---		
	12/18/06	65.67	---	---	3639.14	---		
	3/16/07	65.69	---	---	3639.12	---		
	6/26/07	65.41	---	---	3639.40	---		
	9/27/07	66.46	---	---	3638.35	---		
	12/13/07	65.85	---	---	3638.96	---		

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Well ID	Date	Depth to Groundwater	Depth to LNAPL	LNAPL Thickness	Groundwater Elevation	Total Well Depth	Well Diameter	Well Screen Interval
<i>toc elevation</i>		(ft toc ²)	(ft toc ²)	(ft)	(ft msl ²)	(ft toc ²)	(inches)	(ft bgs ⁴)
MW-6 Cont.	3/6/08	65.68	---	---	3639.13	---		
	6/4/08	65.39	---	---	3639.42	---		
	9/4/08	65.56	---	---	3639.25	---		
	11/13/08	65.32	---	---	3639.49	---		
	3/5/09	65.88	---	---	3638.93	---		
	6/15/09	65.38	---	---	3639.43	---		
	9/9/09	65.67	---	---	3639.14	---		
	11/19/09	65.70	---	---	3639.11	---		
	3/23/10	65.69	---	---	3639.12	---		
	6/29/10	66.69	---	---	3638.12	---		
	9/22/10	66.72	---	---	3638.09	---		
	11/8/10	65.75	---	---	3639.06	---		
	3/3/11	65.52	---	---	3639.29	---		
	6/2/11	65.28	---	---	3639.53	---		
	9/27/11	67.49	---	---	3637.32	---		
	12/1/11	66.55	---	---	3638.26	---		
	3/7/12	66.00	---	---	3638.81	---		
	6/26/12	65.92	---	---	3638.89	---		
	9/20/12	66.53	---	---	3638.28	---		
	11/26/12	66.19	---	---	3638.62	---		
	3/14/13	65.96	---	---	3638.85	---		
	6/14/13	67.08	---	---	3637.73	---		
	9/13/13	66.75	---	---	3638.06	---		
	11/20/13	65.94	---	---	3638.87	---		
	3/20/14	66.24	---	---	3638.57	75.54		
	7/31/14	66.49	---	---	3638.32	75.43		
	9/22/14	66.84	---	---	3637.97	---		
	12/12/14	65.63	---	---	3639.18	---		
	3/31/15	65.24	---	---	3639.57	75.44		
	6/9/15	65.61	---	---	3639.20	75.08		
	9/16/15	64.99	---	---	3639.82	75.00		
	12/9/15	64.63	---	---	3640.18	74.91		
	3/7/16	64.39	---	---	3640.42	74.91		
	6/21/16	64.45	---	---	3640.36	74.35		
	8/31/16	64.95	---	---	3639.86	74.80		
	12/8/16	64.56	---	---	3640.25	74.78		
	3/9/17	64.10	---	---	3640.71	---		
	6/13/17	64.06	---	---	3640.75	74.85		
	9/5/17	64.40	---	---	3640.41	---		
	11/28/17	64.28	---	---	3640.53	---		
	3/22/18	64.22	---	---	3640.59	---		
	6/14/18	64.05	---	---	3640.76	73.25		
	9/6/18	64.33	---	---	3640.48	73.35		
	12/13/18	64.48	---	---	3640.33	73.61		
	2/7/19	64.71	---	---	3640.10	73.44		
	5/2/19	65.06	---	---	3639.75	73.89		
	8/1/19	64.79	---	---	3640.02	73.41		
	11/18/19	64.82	---	---	3639.99	74.91		
	3/26/20	65.05	---	---	3639.76	73.55		
	6/22/20	65.16	---	---	3639.65	73.62		
	8/20/20	65.26	---	---	3639.55	---		
	11/9/20	65.43	---	---	3639.38	---		
	3/16/21	65.43	---	---	3639.38	---		
	5/18/21	65.75	---	---	3639.06	73.58		
	7/19/21	65.83	---	---	3638.98	73.77		
	11/4/21	65.97	---	---	3638.84	---		
	3/8/22	65.72	---	---	3639.09	73.83		
	6/8/22	65.93	---	---	3638.88	---		
	8/15/22	65.93	---	---	3638.88	79.84		
	11/18/22	66.23	---	---	3638.58	73.84		

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Well ID <i>loc elevation</i>	Date	Depth to Groundwater (ft toc ²)	Depth to LNAPL (ft toc ²)	LNAPL Thickness (ft)	Groundwater Elevation (ft msl ²)	Total Well Depth (ft toc ²)	Well Diameter (inches)	Well Screen Interval (ft bgs ⁴)
MW-7 3694.58	7/28/98	58.08	---	---	3636.50	68.88	2.00	49 - 69
	6/25/99	57.96	---	---	3636.62	---		
	2/16/01	58.09	---	---	3636.49	---		
	6/11/02	58.07	---	---	3636.51	---		
	11/26/02	57.92	---	---	3636.66	---		
	6/5/03	58.29	---	---	3636.29	---		
	12/3/03	58.33	---	---	3636.25	---		
	7/1/04	58.11	---	---	3636.47	---		
	12/20/04	57.62	---	---	3636.96	---		
	6/6/05	57.28	---	---	3637.30	---		
	12/12/05	56.84	---	---	3637.74	---		
	1/25/06	56.86	---	---	3637.72	---		
	5/1/06	56.69	---	---	3637.89	---		
	6/26/06	56.66	---	---	3637.92	---		
	12/18/06	56.40	---	---	3638.18	---		
	3/16/07	56.28	---	---	3638.30	---		
	6/26/07	56.29	---	---	3638.29	---		
	9/27/07	56.59	---	---	3637.99	---		
	12/13/07	56.51	---	---	3638.07	---		
	3/6/08	56.56	---	---	3638.02	---		
	6/4/08	56.38	---	---	3638.20	---		
	9/4/08	56.49	---	---	3638.09	---		
	11/13/08	56.40	---	---	3638.18	---		
	3/5/09	56.48	---	---	3638.10	---		
	6/15/09	56.51	---	---	3638.07	---		
	9/9/09	56.64	---	---	3637.94	---		
	11/19/09	56.59	---	---	3637.99	---		
	3/23/10	56.63	---	---	3637.95	---		
	6/29/10	57.13	---	---	3637.45	---		
	9/22/10	57.15	---	---	3637.43	---		
	11/8/10	56.61	---	---	3637.97	---		
	6/2/11	56.58	---	---	3638.00	---		
	12/1/11	57.22	---	---	3637.36	---		
	3/7/12	56.92	---	---	3637.66	---		
	6/26/12	56.93	---	---	3637.65	---		
	9/20/12	57.01	---	---	3637.57	---		
	11/26/12	57.13	---	---	3637.45	---		

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Well ID <i>toc elevation</i>	Date	Depth to Groundwater (ft toc ²)	Depth to LNAPL (ft toc ²)	LNAPL Thickness (ft)	Groundwater Elevation (ft msl ²)	Total Well Depth (ft toc ²)	Well Diameter (inches)	Well Screen Interval (ft bgs ⁴)
MW-7 Cont.	3/14/13	57.02	---	---	3637.56	---		
	6/14/13	57.26	---	---	3637.32	---		
	9/13/13	57.30	---	---	3637.28	---		
	11/20/13	56.93	---	---	3637.65	---		
	3/20/14	56.77	---	---	3637.81	65.09		
	7/31/14	56.63	---	---	3637.95	65.09		
	9/22/14				not gauged			
	12/12/14	56.40	---	---	3638.18	---		
	3/31/15				not gauged			
	6/9/15	56.12	---	---	3638.46	64.91		
	9/16/15	56.04	---	---	3638.54	64.82		
	12/9/15	55.84	---	---	3638.74	---		
	3/7/16	55.72	---	---	3638.86	64.63		
	6/21/16	55.72	---	---	3638.86	64.60		
	8/31/16	54.94	---	---	3639.64	64.62		
	12/8/16	55.64	---	---	3638.94	64.48		
	3/9/17	55.57	---	---	3639.01	---		
	6/13/17	55.51	---	---	3639.07	64.67		
	9/5/17	55.60	---	---	3638.98	---		
	11/28/17	55.49	---	---	3639.09	---		
	3/22/18	55.61	---	---	3638.97	---		
	6/14/18	55.53	---	---	3639.05	64.48		
	9/6/18	55.80	---	---	3638.78	64.31		
	12/13/18	55.70	---	---	3638.88	64.30		
	2/7/19	55.79	---	---	3638.79	64.11		
	5/2/19	55.97	---	---	3638.61	64.13		
	8/1/19	55.98	---	---	3638.60	63.71		
	11/18/19	56.21	---	---	3638.37	64.70		
	3/26/20	56.39	---	---	3638.19	63.69		
	6/22/20	56.49	---	---	3638.09	63.75		
	8/20/20	56.59	---	---	3637.99	---		
	3/16/21	56.76	---	---	3637.82	---		
	5/18/21	56.89	---	---	3637.69	---		
	7/19/21	56.98	---	---	3637.60	---		
	11/4/21	57.03	---	---	3637.55	---		
	3/8/22	56.76	---	---	3637.82	---		
	6/8/22	57.19	---	---	3637.39	---		
	8/15/22	57.20	---	---	3637.38	63.72		
	11/18/22	57.34	---	---	3637.24	63.75		
MW-8 3694.58	7/28/98	56.84	---	---	3637.74	66.91	2.00	46 - 66
	6/25/99	56.56	---	---	3638.02	---		
	2/16/01	56.49	---	---	3638.09	---		
	6/11/02	56.56	---	---	3638.02	---		
	11/26/02	56.88	---	---	3637.70	---		
	6/5/03	56.89	---	---	3637.69	---		
	12/3/03	56.91	---	---	3637.67	---		
	7/1/04	56.70	---	---	3637.88	---		
	12/20/04	56.23	---	---	3638.35	---		
	6/6/05	55.86	---	---	3638.72	---		
	12/12/05	55.29	---	---	3639.29	---		
	1/25/06	55.30	---	---	3639.28	---		
	5/1/06	55.03	---	---	3639.55	---		
	6/26/06	54.96	---	---	3639.62	---		
	12/18/06	54.80	---	---	3639.78	---		
	3/16/07	54.68	---	---	3639.90	---		

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Well ID	Date	Depth to Groundwater (ft toc ²)	Depth to LNAPL (ft toc ²)	LNAPL Thickness (ft)	Groundwater Elevation (ft msl ³)	Total Well Depth (ft toc ²)	Well Diameter (inches)	Well Screen Interval (ft bgs ⁴)
<i>toc elevation</i>								
MW-8 Cont.	6/26/07	54.67	---	---	3639.91	---		
	9/27/07	54.95	---	---	3639.63	---		
	12/13/07	54.82	---	---	3639.76	---		
	3/6/08	54.82	---	---	3639.76	---		
	6/4/08	54.70	---	---	3639.88	---		
	9/4/08	54.77	---	---	3639.81	---		
	11/13/08	54.73	---	---	3639.85	---		
	3/5/09	55.05	---	---	3639.53	---		
	6/15/09	54.96	---	---	3639.62	---		
	9/9/09	55.14	---	---	3639.44	---		
	11/19/09	55.12	---	---	3639.46	---		
	3/23/10	55.16	---	---	3639.42	---		
	6/29/10	55.66	---	---	3638.92	---		
	9/22/10	55.65	---	---	3638.93	---		
	11/8/10	55.12	---	---	3639.46	---		
	6/2/11	55.02	---	---	3639.56	---		
	12/1/11	55.73	---	---	3638.85	---		
	3/7/12	55.46	---	---	3639.12	---		
	6/26/12	55.46	---	---	3639.12	---		
	9/20/12	55.50	---	---	3639.08	---		
	11/26/12	55.57	---	---	3639.01	---		
	3/14/13	55.38	---	---	3639.20	---		
	6/14/13	55.61	---	---	3638.97	---		
	9/13/13	55.65	---	---	3638.93	---		
	11/20/13	55.43	---	---	3639.15	---		
	3/20/14	55.22	---	---	3639.36	61.11		
	7/31/14	55.19	---	---	3639.39	61.40		
	9/22/14	not gauged				---		
	12/12/14	54.75	---	---	3639.83	---		
	3/31/15	not gauged				---		
	6/9/15	54.43	---	---	3640.15	61.13		
	9/16/15	54.33	---	---	3640.25	61.15		
	12/9/15	54.28	---	---	3640.30	---		
	3/7/16	54.01	---	---	3640.57	61.14		
	6/21/16	54.02	---	---	3640.56	61.18		
	8/31/16	54.20	---	---	3640.38	61.25		
	12/8/16	53.82	---	---	3640.76	61.01		
	3/9/17	53.75	---	---	3640.83	---		
	6/13/17	53.75	---	---	3640.83	64.91		
	9/5/17	53.80	---	---	3640.78	---		
	11/28/17	53.70	---	---	3640.88	---		

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Well ID <i>toc elevation</i>	Date	Depth to Groundwater (ft toc ²)	Depth to LNAPL (ft toc ²)	LNAPL Thickness (ft)	Groundwater Elevation (ft msl ²)	Total Well Depth (ft toc ²)	Well Diameter (inches)	Well Screen Interval (ft bgs ⁴)
MW-8 Cont.	3/22/18	53.70	--	--	3640.88	--		
	6/14/18	53.77	--	--	3640.81	61.21		
	9/6/18	54.00	--	--	3640.58	61.15		
	12/13/18	54.01	--	--	3640.57	61.12		
	2/7/19	54.10	--	--	3640.48	61.16		
	5/2/19	54.30	--	--	3640.28	64.76		
	8/1/19	54.40	--	--	3640.18	61.16		
	11/18/19	54.67	--	--	3639.91	62.40		
	3/26/20	54.82	--	--	3639.76	64.65		
	6/22/20	55.03	--	--	3639.55	64.85		
	8/20/20	55.03	--	--	3639.55	---		
	3/16/21	55.22	---	---	3639.36	---		
	5/18/21	55.30	---	---	3639.28	---		
	7/19/21	55.42	---	---	3639.16	---		
	11/4/21	55.50	---	---	3639.08	---		
	3/8/22	55.22	---	---	3639.36	61.23		
	6/8/22	55.72	---	---	3638.86	---		
	8/15/22	55.72	---	---	3638.86	64.82		
	11/18/22	55.89	---	---	3638.69	61.25		
MW-9R* <i>(not surveyed)</i>	6/9/15	46.99	---	---	---	62.12	2.00	29.5 - 59.5
	9/16/15	46.93	---	---	---	62.12		
	12/9/15	46.72	---	---	---	---		
	3/7/16	46.62	---	---	---	62.08		
	6/21/16	46.58	---	---	---	62.13		
	8/31/16	46.77	---	---	---	62.18		
	12/8/16	46.48	---	---	---	62.02		
	3/9/17	46.40	---	---	---	---		
	6/13/17	46.43	---	---	---	62.13		
	9/5/17	46.50	---	---	---	---		
	11/28/17	46.23	---	---	---	---		
	3/22/18	46.36	---	---	---	---		
	6/15/18	46.39	---	---	---	62.14		
	9/6/18	46.61	---	---	---	62.07		
	12/13/18	46.51	---	---	---	62.41		
	2/7/19	46.59	---	---	---	62.05		
	5/2/19	46.77	---	---	---	62.16		
	8/1/19	46.89	---	---	---	62.08		
	11/18/19	47.16	---	---	---	63.91		
	3/26/20	47.32	---	---	---	62.30		
	6/22/20	47.48	---	---	---	62.33		
	8/20/20	47.54	---	---	---	---		
	3/16/21	47.78	---	---	---	---		
	5/18/21	47.85	---	---	---	62.82		
	7/19/21	47.95	---	---	---	---		
	11/4/21	48.00	---	---	---	---		
	3/8/22	48.03	---	---	---	62.70		
	6/8/22	48.18	---	---	---	---		
	8/15/22	48.21	---	---	---	62.23		
	11/18/22	48.40	---	---	---	62.18		
RW-1 3699.92	11/3/99	62.17	---	---	3637.75	71.60	4.00	55 - 75
	2/16/01	62.37	62.33	0.04	3637.59	---		
	6/11/02	62.26	61.86	0.40	3638.01	---		
	11/26/02	62.60	62.07	0.53	3637.79	---		
	6/5/03	63.00	62.84	0.16	3637.06	---		
	12/3/03	63.26	62.61	0.65	3637.23	---		
	7/1/04	63.10	62.33	0.77	3637.50	---		
	12/20/04	61.80	60.96	0.84	3638.86	---		
	3/1/05	----- start-up groundwater extraction system -----						
	1/25/06	61.44	58.67	2.77	3640.92	---		
	5/1/06	61.56	58.38	3.18	3641.16	---		
	6/26/06	61.59	58.43	3.16	3641.11	---		
	12/18/06	58.78	58.55	0.23	3641.34	---		
	3/16/07	58.74	58.30	0.44	3641.57	---		
	6/26/07	58.52	58.37	0.15	3641.53	---		
	9/27/07	59.40	58.72	0.68	3641.13	---		
	12/13/07	60.90	58.44	2.46	3641.23	---		
	3/6/08	59.24	58.76	0.48	3641.11	---		
	6/4/08	59.37	58.59	0.78	3641.25	---		
	9/4/08	58.82	58.51	0.31	3641.38	---		
	11/13/08	60.59	58.10	2.49	3641.56	---		

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Well ID	Date	Depth to Groundwater	Depth to LNAPL	LNAPL Thickness	Groundwater Elevation	Total Well Depth	Well Diameter	Well Screen Interval
<i>toc elevation</i>		(ft toc ²)	(ft toc ²)	(ft)	(ft msl ²)	(ft toc ²)	(inches)	(ft bgs ⁴)
RW-1 Cont.	3/5/09	60.82	58.50	2.32	3641.18	---		
	6/15/09	60.65	58.28	2.37	3641.40	---		
	9/9/09	60.77	58.50	2.27	3641.19	---		
	11/19/09	58.96	58.63	0.33	3641.26	---		
	3/23/10	61.51	58.80	2.71	3640.84	---		
	6/29/10	62.18	59.00	3.18	3640.59	---		
	9/22/10	60.80	58.40	2.40	3641.27	---		
	11/8/10	61.16	58.39	2.77	3641.24	---		
	6/2/11	61.23	58.36	2.87	3641.26	---		
	9/27/11	62.44	59.43	3.01	3640.18	---		
	12/2/11	62.24	58.95	3.29	3640.63	---		
	3/7/12	61.10	58.80	2.30	3640.88	---		
	6/26/12	60.80	58.80	2.00	3640.91	---		
	9/20/12	62.09	58.84	3.25	3640.75	---		
	11/26/12	62.24	58.85	3.39	3640.72	---		
	3/14/13	61.96	58.72	3.24	3640.87	---		
	6/14/13	62.51	59.12	3.39	3640.45	---		
	9/13/13	62.91	60.05	2.86	3639.58	---		
	11/20/13	not gauged				---		
	3/20/14	61.36	58.61	2.75	3641.03	---		
	7/31/14	60.87	58.69	2.18	3641.01	---		
	9/22/14	not gauged				---		
	12/12/14	59.98	58.31	1.67	3641.44	---		
	3/31/15	58.76	58.07	0.69	3641.78	70.99		
	6/9/15	60.44	58.00	2.44	3641.67	---		
	9/16/15	59.92	57.80	2.12	3641.90	---		
	12/9/15	not gauged				---		
	3/7/16	57.76	57.75	0.01	3642.17	---		
	6/21/16	57.64	57.62	0.02	3642.30	---		
	8/31/16	57.41	57.34	0.07	3642.57	---		
	12/8/16	57.61	---	trace	3642.31	---		
	3/1/17	skimmer pump removed, absorbant sock installed				---		
	3/9/17	57.45	---	trace	3642.47	---		
	6/13/17	57.36	57.34	0.02	3642.58	---		
	9/5/17	not gauged				---		
	11/28/17	57.31	---	---	3642.61	---		
	1/9/18	57.42	---	---	3642.50	---		
	1/26/18	57.50	---	trace	3639.35	---		
	2/5/18	57.21	---	---	3642.71	---		
	2/20/18	57.35	---	trace	3639.50	---		
	3/8/18	57.25	---	trace	3639.60	---		

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Well ID <i>toc elevation</i>	Date	Depth to Groundwater (ft toc ²)	Depth to LNAPL (ft toc ²)	LNAPL Thickness (ft)	Groundwater Elevation (ft msl ²)	Total Well Depth (ft toc ²)	Well Diameter (inches)	Well Screen Interval (ft bgs ⁴)
RW-1 Cont.	3/22/18	57.52	---	trace	3642.40	---		
	4/2/18	57.33	---	---	3642.59	---		
	4/16/18	57.50	---	---	3642.42	---		
	5/2/18	57.38	---	---	3642.54	---		
	5/14/18	57.30	---	---	3642.62	---		
	6/1/18	57.32	---	trace	3642.60	---		
	6/15/18	57.39	57.36	0.03	3642.53	---		
	6/27/18	57.47	57.93	---	3642.45	---		
	7/9/18	57.49	---	---	3642.43	---		
	7/25/18	57.52	---	---	3642.40	---		
	8/6/18	57.56	---	---	3642.36	---		
	8/21/18	57.50	---	trace	3642.42	---		
	9/6/18	57.55	---	trace	3642.37	---		
	9/21/18	57.87	---	---	3642.05	---		
	10/1/18	57.70	---	---	3642.22	---		
	11/28/18	57.35	---	trace	3631.26	---		
	12/13/18	57.7	---	---	3642.22	71.10		
	1/9/19	58.65	58.64	trace	3641.27	---		
	2/7/19	57.88	---	trace	3642.04	---		
	2/21/19	57.69	---	---	3642.23	---		
	3/7/19	57.32	57.71	---	3642.60	---		
	3/18/19	57.74	---	---	3642.18	---		
	4/2/19	57.72	---	---	3642.20	---		
	4/18/19	58.09	57.99	---	3641.83	---		
	5/2/19	58.05	58	0.05	3641.87	---		
	6/9/19	60.4	58	2.40	3639.52	---		
	6/24/19	60.4	57.7	2.70	3639.52	---		
	7/23/19	60.59	57.79	2.80	3639.33	---		
	8/2/19	60.63	57.74	2.89	3639.29	---		
	8/26/19	60.63	57.74	2.89	3639.29	---		
	9/6/19	60.82	57.79	3.03	3639.10	---		
	9/18/19	60.64	57.89	2.75	3639.28	---		
	9/30/19	60.55	57.89	trace	3639.37	---		
	11/19/19	63.21	57.95	5.26	3636.71	---		
	1/31/20	62.10	58.10	4.00	3641.41	---		
	2/13/20	62.12	58.08	4.04	3641.42	---		
	2/26/20	61.62	58.15	3.47	3641.41	---		
	3/12/20	62.47	57.93	4.54	3641.52	---		
	3/26/20	62.13	57.90	4.23	3641.58	---		
	4/10/20	61.90	57.99	3.91	3641.53	---		
	4/24/20	61.84	58.02	3.82	3641.51	---		
	5/13/20	62.41	57.97	4.44	3641.49	---		
	6/23/20	62.10	58.05	4.05	3641.45	---		
	8/20/20	62.25	58.11	4.14	3641.38	---		
	9/24/20	62.41	58.21	4.20	3641.28	---		
	11/12/20	62.57	58.26	4.31	3641.22	---		
	3/16/21	62.56	58.19	4.37	3641.28	---		
	5/18/21	61.95	58.39	3.56	3641.16	---		
	7/19/21	62.89	58.53	4.36	3640.94	---		
	9/13/21	62.93	58.59	4.34	3640.88	---		
	11/4/21	62.79	58.56	4.23	3640.92	---		
	3/8/22	62.78	58.56	4.22	3640.93	---		
	6/8/22	63.25	58.26	4.99	3641.15	---		
	8/15/22	62.57	58.85	3.72	3640.69	---		
	11/18/22	62.40	59.01	3.39	3640.56	---		

Appendix D
Cumulative Groundwater Gauging Data
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Well ID <i>loc elevation</i>	Date	Depth to Groundwater (ft toc ²)	Depth to LNAPL (ft toc ²)	LNAPL Thickness (ft)	Groundwater Elevation (ft msl ²)	Total Well Depth (ft toc ²)	Well Diameter (inches)	Well Screen Interval (ft bgs ⁴)
RW-2 3692.12	10/14/99	53.28	---	---	3638.84	67.55	4.00	47 - 67
	11/3/99	53.95	---	---	3638.17	---		
	2/16/01	54.01	---	---	3638.11	---		
	6/11/02	54.01	53.98	0.03	3638.14	---		
	11/26/02	54.28	54.07	0.21	3638.02	---		
	6/5/03	53.24	53.23	0.01	3638.89	---		
	12/3/03	54.51	54.38	0.13	3637.72	---		
	7/1/04	54.51	54.12	0.39	3637.95	---		
	12/20/04	53.69	53.52	0.17	3638.58	---		
	3/1/05	----- start-up groundwater extraction system -----						
	1/25/06	51.55	51.14	0.41	3640.93	---		
	5/1/06	51.34	50.91	0.43	3641.16	---		
	6/26/06	51.02	50.94	0.08	3641.17	---		
	11/28/06	----- absorbant sock installed -----						
	12/18/06	51.15	50.75	0.40	3641.32	---		
	3/16/07	50.69	---	---	3641.43	---		
	6/26/07	50.63	---	---	3641.49	---		
	9/27/07	51.00	---	---	3641.12	---		
	12/13/07	50.92	---	---	3641.20	---		
	3/6/08	50.90	---	---	3641.22	---		
	6/4/08	50.65	---	---	3641.47	---		
	9/4/08	50.73	---	---	3641.39	---		
	11/13/08	50.67	---	---	3641.45	---		

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Well ID <i>toc elevation</i>	Date	Depth to Groundwater (ft toc ²)	Depth to LNAPL (ft toc ²)	LNAPL Thickness (ft)	Groundwater Elevation (ft msl ²)	Total Well Depth (ft toc ²)	Well Diameter (inches)	Well Screen Interval (ft bgs ⁴)
RW-2 Cont.	3/5/09	51.03	---	---	3641.09	---		
	6/15/09	50.80	---	---	3641.32	---		
	9/9/09	51.02	50.97	0.05	3641.14	---		
	11/19/09	50.99	50.95	0.04	3641.17	---		
	3/23/10	51.16	---	---	3640.96	---		
	6/29/10	51.70	51.56	0.14	3640.55	---		
	9/22/10	51.65	---	---	3640.47	---		
	11/8/10	50.95	50.94	0.01	3641.18	---		
	11/29/10	50.89	---	---	3641.23	---		
	2/4/11	50.82	---	---	3641.30	---		
	6/2/11	50.91	---	---	3641.21	---		
	9/27/11	51.97	---	---	3640.15	---		
	12/2/11	51.85	---	---	3640.27	---		
	3/7/12	51.33	---	---	3640.79	---		
	6/26/12	51.35	51.27	0.08	3640.84	---		
	9/20/12	51.54	51.40	0.14	3640.71	---		
	11/26/12	55.26	---	---	3636.86	---		
	3/14/13	51.50	---	---	3640.62	---		
	6/14/13	52.20	51.73	0.47	3640.34	---		
	9/13/13	51.89	51.74	0.15	3640.36	---		
	11/20/13	51.29	51.26	0.03	3640.86	---		
	3/20/14	51.12	---	---	3641.00	---		
	7/31/14	51.14	---	---	3640.98	---		
	9/22/14	51.49	---	---	3640.63	---		
	12/12/14	50.98	---	---	3641.14	---		
	3/31/15	50.39	---	---	3641.73	---		
	6/9/15	50.44	---	---	3641.68	67.13		
	9/16/15	50.28	---	---	3641.84	---		
	12/9/16	49.92	---	---	3642.20	---		
	3/7/16	49.83	---	---	3642.29	67.18		
	6/21/16	49.84	---	---	3642.28	67.25		
	8/31/16	50.11	---	---	3642.01	67.22		
	12/8/16	49.83	---	---	3642.29	---		
	3/9/17	49.65	---	---	3642.47	---		
	6/13/17	49.60	---	---	3642.52	67.40		
	9/5/17	49.70	---	---	3642.42	---		
	11/28/17	49.57	---	---	3642.55	---		
	1/9/18	49.55	---	---	3642.57	---		
	1/26/18	49.64	---	---	3642.48	---		
	2/5/18	49.46	---	trace	3642.66	---		
	2/20/18	49.52	---	---	3642.60	---		

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Well ID <i>toc elevation</i>	Date	Depth to Groundwater (ft toc ²)	Depth to LNAPL (ft toc ²)	LNAPL Thickness (ft)	Groundwater Elevation (ft msl ²)	Total Well Depth (ft toc ²)	Well Diameter (inches)	Well Screen Interval (ft bgs ⁴)
RW-2 Cont.	3/8/18	49.50	---	---	3642.62	---		
	3/22/18	49.58	---	---	3642.54	---		
	4/2/18	49.52	---	---	3642.60	---		
	4/16/18	49.60	---	---	3642.52	---		
	5/2/18	49.61	---	trace	3642.51	---		
	5/14/18	49.55	---	trace	3642.57	---		
	6/1/18	49.56	---	---	3642.56	---		
	6/15/18	49.62	---	---	3642.50	67.38		
	6/27/18	49.68	---	---	3642.44	---		
	7/9/18	49.73	---	---	3642.39	---		
	7/25/18	49.74	---	---	3642.38	---		
	8/6/18	49.75	---	---	3642.37	---		
	8/21/18	49.76	---	---	3642.36	---		
	9/6/18	49.80	---	---	3642.32	67.20		
	9/21/18	49.88	---	---	3642.24	---		
	10/1/18	49.72	---	---	3642.40	---		
	11/28/18	49.7	---	---	3642.42	---		
	12/13/18	49.85	---	---	3642.27	67.71		
	2/7/19	50	---	---	3642.12	67.27		
	5/2/19	50.24	---	trace	3641.88	---		
	8/2/19	50.32	50.31	0.01	3641.8	---		
	11/19/19	50.55	---	---	3641.57	69.80		
	1/31/20	50.72	---	---	3641.40	67.41		
	2/13/20	50.70	---	---	3641.42	---		
	2/26/20	50.69	---	---	3641.43	---		
	3/12/20	50.60	---	---	3641.52	---		
	3/26/20	50.60	---	---	3641.52	67.50		
	4/10/20	50.66	---	---	3641.46	---		
	4/24/20	50.70	---	---	3641.42	---		
	5/13/20	50.63	---	---	3641.49	---		
	6/22/20	50.80	---	---	3641.32	70.11		
	8/20/20	50.81	---	---	3641.31	---		
	9/24/20	50.92	---	---	3641.20	---		
	11/9/20	50.96	---	---	3641.16	---		
	3/16/21	51.02	50.90	0.12	3641.21	---		
	5/18/21	51.46	51.05	0.41	3641.03	---		
	7/19/21	51.68	51.20	0.48	3640.87	---		
	9/13/21	51.8	51.22	0.58	3640.84	---		
	11/4/21	51.3	51.29	0.01	3640.83	---		
	3/8/22	51.55	51.25	0.30	3640.84	---		
	6/8/22	51.98	51.40	0.58	3640.66	---		
	8/15/22	51.52	51.50	0.02	3640.62	---		
	11/18/22	51.69	51.63	0.06	3640.48	---		
RW-3 3690.86	10/14/99	45.82	---	---	3645.04	68.65	4.00	47 - 67
	11/3/99	52.82	---	---	3638.04	---		
	2/16/01	52.88	---	---	3637.98	---		
	6/11/02	52.91	---	---	3637.95	---		
	11/26/02	53.22	53.15	0.07	3637.70	---		
	6/5/03	54.56	54.40	0.16	3636.44	---		
	12/3/03	53.23	---	---	3637.63	---		
	7/1/04	53.19	52.98	0.21	3637.85	---		
	12/20/04	52.50	52.09	0.41	3638.72	---		
	3/1/05	----- start-up groundwater extraction system -----						
	1/25/06	50.71	---	---	3640.15	---		
	5/1/06	50.49	---	---	3640.37	---		
	6/26/06	50.50	---	---	3640.36	---		
	11/28/06	----- absorbant sock installed -----						
	12/18/06	50.31	---	---	3640.55	---		
	3/16/07	50.22	---	---	3640.64	---		
	6/26/07	50.15	---	---	3640.71	---		
	9/27/07	50.49	---	---	3640.37	---		
	12/13/07	52.38	---	---	3638.48	---		
	3/6/08	50.42	---	---	3640.44	---		
	6/4/08	50.32	---	---	3640.54	---		
	9/4/08	50.90	---	---	3639.96	---		

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Well ID	Date	Depth to Groundwater (ft toc ²)	Depth to LNAPL (ft toc ²)	LNAPL Thickness (ft)	Groundwater Elevation (ft msl ²)	Total Well Depth (ft toc ²)	Well Diameter (inches)	Well Screen Interval (ft bgs ⁴)
RW-3 Cont.	11/13/08	50.15	---	---	3640.71	---		
	3/5/09	50.49	---	---	3640.37	---		
	6/15/09	50.35	---	---	3640.51	---		
	9/9/09	50.52	---	---	3640.34	---		
	11/19/09	50.50	---	---	3640.36	---		
	3/23/10	51.73	---	---	3639.13	---		
	6/29/10	51.10	---	---	3639.76	---		
	9/22/10	51.22	---	---	3639.64	---		
	11/8/10	50.65	50.64	0.01	3640.22	---		
	2/4/11	50.39	---	---	3640.47	---		
	6/2/11	54.01	---	---	3636.85	---		
	9/27/11	51.55	---	---	3639.31	---		
	12/2/11	51.39	---	---	3639.47	---		
	3/7/12	51.00	50.85	0.15	3639.99	---		
	6/26/12	50.90	50.84	0.06	3640.01	---		
	9/20/12	----- not gauged (obstruction in well) -----						
	11/26/12	----- not gauged (obstruction in well) -----						
	3/14/13	51.02	---	---	3639.84	51.10		
	6/14/13	51.41	51.25	0.16	3640.85	---		
	9/13/13	51.70	51.02	0.68	3641.03	---		
	11/20/13	50.93	50.86	0.07	3641.25	---		
	3/20/14	50.68	---	---	3640.18	---		
	7/31/14	50.69	---	---	3640.17	---		
	9/22/14	50.97	---	---	3639.89	---		
	12/12/14	50.41	---	---	3640.45	---		
	3/31/15	49.93	---	---	3640.93	---		
	6/9/15	49.95	---	---	3640.91	68.09		
	9/16/15	49.82	---	---	3641.04	---		
	12/9/15	49.77	---	---	3641.09	67.27		
	3/7/16	49.43	---	---	3641.43	67.93		
	6/21/16	49.44	---	---	3641.42	68.02		
	8/31/16	49.69	---	---	3641.17	68.05		
	12/8/16	49.39	---	---	3641.47	---		
	3/9/17	49.23	---	---	3641.63	---		
	6/13/17	49.18	---	---	3641.68	68.10		
	9/5/17	49.31	---	---	3641.55	---		
	11/28/17	49.12	---	---	3641.74	---		
	1/9/18	49.10	---	---	3641.76	---		
	1/26/18	49.20	---	---	3641.66	---		
	2/5/18	49.03	---	---	3641.83	---		
	2/20/18	49.17	---	---	3641.69	---		

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Well ID	Date	Depth to Groundwater	Depth to LNAPL	LNAPL Thickness	Groundwater Elevation	Total Well Depth	Well Diameter	Well Screen Interval
<i>toc elevation</i>		(ft toc ²)	(ft toc ²)	(ft)	(ft msl ²)	(ft toc ²)	(inches)	(ft bgs ⁴)
RW-3 Cont.	3/8/18	49.08	---	---	3641.78	---		
	3/22/18	49.20	---	---	3641.66	---		
	4/2/18	49.18	---	---	3641.68	---		
	4/16/18	50.20	---	---	3640.66	---		
	5/2/18	50.20	---	---	3640.66	---		
	5/14/18	49.15	---	---	3641.71	---		
	6/1/18	49.20	---	---	3641.66	---		
	6/15/18	49.23	---	---	3641.63	68.10		
	6/27/18	49.27	---	---	3641.59	---		
	7/9/18	49.28	---	---	3641.58	---		
	7/25/18	49.30	---	---	3641.56	---		
	8/6/18	49.33	---	---	3641.53	---		
	8/21/18	49.35	---	---	3641.51	---		
	9/6/18	49.40	---	---	3641.46	68.01		
	9/21/18	49.42	---	---	3641.44	---		
	10/1/18	49.35	---	---	3641.51	---		
	11/28/18	49.29	---	---	3642.83	---		
	12/13/18	49.41	---	---	3642.71	68.23		
	2/7/19	49.56	---	---	3642.56	67.95		
	5/2/19	49.81	---	trace	3642.31	---		
	8/2/19	49.87	---	trace	3642.25	---		
	11/19/19	50.07	---	---	3642.05	70.44		
	1/31/20	50.31	---	---	3641.81	68.05		
	2/13/20	50.26	---	---	3641.86	---		
	2/26/20	50.26	---	---	3641.86	---		
	3/12/20	50.20	---	---	3641.92	---		
	3/26/20	50.13	---	---	3641.99	68.03		
	4/10/20	50.26	---	---	3641.86	---		
	4/24/20	50.28	---	---	3641.84	---		
	5/13/20	50.23	---	---	3641.89	---		
	6/22/20	50.55	---	---	3641.57	67.95		
	8/20/20	50.41	---	---	3641.71	---		
	9/24/20	50.52	---	---	3641.60	---		
	11/9/20	50.63	---	---	3641.49	---		
	3/16/21	50.79	50.51	0.28	3640.32	---		
	5/18/21	50.87	50.67	0.20	3640.17	---		
	7/19/21	51.15	50.79	0.36	3640.03	---		
	9/13/21	51.35	50.81	0.54	3639.99	---		
	11/4/21	50.87	50.86	0.01	3640.00	---		
	3/8/22	51.00	50.85	0.15	3639.99	---		
	6/8/22	51.19	51.14	0.05	3639.71	---		
	8/15/22	51.68	51.07	0.61	3639.73	---		
	11/18/22	51.21	51.20	0.01	3639.66	---		
RW-4 3699.94	6/2/11	60.44	59.40	1.04	3640.43	75.00	4.00	35 - 75
	6/21/11	63.15	59.35	3.80	3640.20	---		
	9/27/11	65.66	59.95	5.71	3639.40	---		
	12/2/11	63.54	59.82	3.72	3639.74	---		
	3/7/12	60.21	59.90	0.31	3640.01	---		
	6/26/12	63.06	59.55	3.51	3640.03	---		
	9/20/12	63.10	56.08	7.02	3643.14	---		
	11/26/12	63.67	59.70	3.97	3639.83	---		
	3/14/13	63.68	59.98	3.70	3639.58	---		
	6/14/13	not gauged						
	9/13/13	63.14	59.02	4.12	3640.50	---		
	11/20/13	62.98	59.56	3.42	3640.03	---		
	3/20/14	60.44	59.70	0.74	3640.16	---		
	7/31/14	60.17	59.78	0.39	3640.12	---		
	9/22/14	not gauged						
	12/12/14	60.91	59.03	1.88	3640.72	---		
	3/31/15	59.15	58.98	0.17	3640.94	77.22		
	6/9/15	61.50	58.89	2.61	3640.78	---		
	9/16/15	60.40	58.75	1.65	3641.02	---		
	12/9/15	not gauged						
	3/7/16	58.55	58.47	0.08	3641.46	---		
	6/21/16	58.57	58.52	0.05	3641.41	---		

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Well ID	Date	Depth to Groundwater (ft toc ²)	Depth to LNAPL (ft toc ²)	LNAPL Thickness (ft)	Groundwater Elevation (ft msl ²)	Total Well Depth (ft toc ²)	Well Diameter (inches)	Well Screen Interval (ft bgs ⁴)
loc elevation								
RW-4 Cont.	8/31/16	58.30	58.24	0.06	3641.69	---		
	12/8/16	58.70	58.47	0.23	3641.45	---		
	3/1/17		----- skimmer pump removed, absorbant sock installed -----					
	3/9/17	58.38	58.37	0.01	3641.57	---		
	6/13/17	58.54	58.38	0.16	3641.54	---		
	9/5/17		----- not gauged -----					
	11/28/17	59.09	58.11	0.98	3641.73	---		
	1/9/18	59.17	58.15	1.02	3641.68	---		
	1/26/18	59.20	58.19	1.01	3641.65	---		
	2/5/18	58.53	58.05	0.48	3641.84	---		
	2/20/18	58.98	58.11	0.87	3641.74	---		
	3/8/18	58.69	58.09	0.60	3641.79	---		
	3/22/18	58.91	58.31	0.60	3641.57	---		
	4/2/48	58.81	58.10	0.71	3641.77	---		
	4/16/18	58.91	58.23	0.68	3641.64	---		
	5/2/18	59.18	58.18	1.00	3641.66	---		
	5/14/18	59.01	58.21	0.80	3641.65	---		
	6/1/18	59.20	58.20	1.00	3641.64	---		
	6/15/18	59.08	58.18	0.90	3641.67	---		
	6/27/18	59.59	58.23	1.00	3641.25	---		
	7/9/18	59.30	59.27	1.03	3641.56	---		
	7/25/18	59.35	58.24	1.06	3641.54	---		
	8/6/18	59.39	58.33	1.01	3641.46	---		
	8/21/18	59.38	58.31	1.07	3641.52	---		
	9/6/18	59.37	58.35	1.02	3641.48	---		
	9/21/18	59.95	58.39	1.20	3641.07	---		
	10/1/18	59.58	58.31	1.27	3641.50	---		
	11/28/18	59.60	58.23	1.37	3641.57	---		
	12/13/18	59.71	58.30	1.41	3641.49	---		
	1/9/19	58.38	57.95	0.43	3641.95	---		
	2/7/19	60.47	58.52	1.95	3641.22	---		
	2/21/19	59.94	58.46	1.48	3641.33	---		
	3/7/19	59.71	58.46	1.25	3641.35	---		
	3/18/19	60.08	58.46	1.62	3641.31	---		
	4/2/19	60.11	58.43	1.68	3641.34	---		
	4/18/19	61.12	58.66	2.46	3641.03	---		
	5/2/19	60.67	58.68	1.99	3641.06	---		
	6/9/19	60.57	57.70	2.87	3641.94	---		
	6/24/19	60.57	58.68	1.89	3641.07	---		
	7/23/19	61.04	58.70	2.34	3641.00	---		
	8/2/19	60.27	58.77	1.50	3641.02	---		
	8/23/19	60.94	58.73	2.21	3640.98	---		
	9/6/19	60.45	58.82	1.63	3640.95	---		
	9/18/19	61.06	58.88	2.18	3640.84	---		
	9/30/19	60.63	58.88	1.75	3640.88	---		
	11/19/19	62.73	58.77	3.96	3640.76	---		
	1/31/20	62.70	58.99	3.71	3640.57	---		
	2/13/20	62.81	58.96	3.85	3640.58	---		
	2/26/20	62.65	58.98	3.67	3640.58	---		
	3/12/20	62.87	58.87	4.00	3640.66	---		
	3/26/20	62.91	58.52	4.39	3640.97	---		
	4/10/20	62.80	58.91	3.89	3640.63	---		
	4/24/20	62.83	58.94	3.89	3640.60	---		
	5/13/20	63.27	58.41	4.86	3641.03	---		
	6/23/20	65.55	58.64	6.91	3640.59	---		
	8/20/20	63.45	59.00	4.45	3640.48	---		
	9/24/20	63.75	59.07	4.68	3640.39	---		
	11/12/20	63.88	59.11	4.77	3640.34	---		
	3/16/21	63.92	59.09	4.83	3640.35	---		
	5/18/21	64.26	59.23	5.03	3640.19	---		
	7/19/21	63.54	59.38	4.16	3640.13	---		
	9/13/21	64.67	59.44	5.23	3639.96	---		
	11/4/21	64.09	59.45	4.64	3640.01	---		
	3/8/22	63.95	59.46	4.49	3640.02	---		
	6/8/22	64.37	59.62	4.75	3639.83	---		
	8/15/22	64.27	59.65	4.62	3639.81	---		
	11/18/22	63.90	59.85	4.05	3639.67	---		

Appendix D
Cumulative Groundwater Gauging Data
Chevron Environmental Management Company
Former New Mexico "F" State Tank Battery
Lea County, New Mexico



Well ID <i>toc elevation</i>	Date	Depth to Groundwater (ft toc ²)	Depth to LNAPL (ft toc ²)	LNAPL Thickness (ft)	Groundwater Elevation (ft msl ²)	Total Well Depth (ft toc ²)	Well Diameter (inches)	Well Screen Interval (ft bgs ⁴)
WW-1 3704.17	6/11/02	66.35	---	---	3637.82	unknown	unknown	unknown
	6/5/03	68.25	---	---	3635.92	---	---	---
	--	----- not gauged since 2003 -----						
WW-2 3703.84	6/11/02	66.18	---	---	3637.66	unknown	unknown	unknown
	11/26/02	66.18	---	---	3637.66	---	---	---
	6/5/03	68.54	---	---	3635.30	---	---	---
	--	----- not gauged since 2003 -----						

Notes:

Data through June 6, 2005 provided by Larson & Associates, Inc.

toc - top of casing.

msl - mean sea level.

bgs - below ground surface.

Corrected groundwater elevations from July 1998 to December 2006 were calculated using LNAPL specific gravity of 0.88.

Corrected groundwater elevations from January 2007 to current were calculated using LNAPL specific gravity of 0.897.

MW-1, MW-2 and MW-9 were plugged and abandoned and replaced with RW-1, RW-2 and RW-3 in November 1999.

Monitor wells (MWs) are 2-inch in diameter (except for MW-9R); Recovery wells (RWs) are 4-inch in diameter.

*MW-9R was installed May 19, 2015. An elevation survey of this monitoring well had not been completed prior to submission of this report.

Appendix E

Cumulative Summary of Groundwater Analytical Results

Appendix E
Cumulative Groundwater Analytical Data
Chevron Environmental Management Company
Former New Mexico "F" State Tank Battery
Lea County, New Mexico



Sample ID	Sample Date	Benzene	Toluene	Ethylbenzene	Total Xylenes	Chloride
New Mexico Water Quality Control Commission Groundwater Standard						
		0.005 ¹	1.0 ¹	0.7 ¹	0.62 ¹	250 ²
MW-3	7/28/98	0.003	<0.001	<0.001	0.002	36
MW-3	2/16/01	<0.005	<0.005	<0.005	<0.005	31
MW-3	6/12/02	<0.005	<0.005	<0.005	<0.005	27.1
MW-3	11/26/03	<0.001	<0.001	<0.001	<0.001	31.9
MW-3	6/6/03	<0.001	<0.001	<0.001	<0.001	27.5
MW-3	12/4/03	<0.001	<0.001	<0.001	0.0017	26.1
MW-3	7/2/04	<0.005	<0.005	<0.005	<0.005	28
MW-3	12/21/04	<0.005	<0.005	<0.005	<0.005	32.3
MW-3	6/6/05	<0.00100	<0.00100	<0.00100	<0.00100	34.3
MW-3	12/13/05	<0.005	<0.005	<0.005	<0.010	29.3
MW-3	6/27/06	<0.005	<0.005	<0.005	<0.010	31.1
MW-3	12/19/06	<0.005	<0.005	<0.005	<0.001	28
MW-3	6/27/07	<0.005	<0.005	<0.005	<0.010	31
MW-3	12/14/07	<0.005	<0.005	<0.005	<0.010	31
MW-3	6/5/08	<0.00037	<0.00039	<0.00042	<0.00035	30
MW-3	11/14/08	<0.00037	<0.00039	<0.00042	<0.00035	32
DUP	11/14/08	<0.00037	<0.00039	<0.00042	<0.00035	32
MW-3	6/16/09	<0.00037	<0.00039	<0.00042	<0.00035	35
MW-3	11/20/09	<0.00037	<0.00039	<0.00042	<0.00035	40
MW-3	7/1/10	<0.00020	<0.00020	<0.00020	<0.00070	50.4
MW-3	11/9/10	<0.0001	<0.0001	<0.0001	<0.0003	64
MW-3	6/2/11	0.00053J	0.00061J	<0.0010	<0.0030	90.7
MW-3	12/2/11	<0.0001	<0.0001	<0.0001	<0.0003	85.0
DUP	12/2/11	<0.0001	<0.0001	<0.0001	<0.0003	85.7
MW-3	6/26/12	<0.0001	<0.0001	<0.0001	<0.0001	114
MW-3	11/26/12	<0.0001	<0.0002	0.00116	0.00345	94.6
MW-3	6/14/13	<0.001	<0.002	<0.001	<0.001	79
MW-3	11/27/13	<0.001	<0.002	<0.001	<0.001	101
MW-3	8/1/14	<0.001	<0.002	<0.001	<0.003	75.6
MW-3	12/12/14	<0.001	<0.002	<0.001	<0.003	137
MW-3	6/9/15	<0.001	<0.002	<0.001	<0.003	89.1
MW-3	12/9/15	<0.001	<0.002	<0.001	<0.003	67.8
MW-3	6/21/16	<0.002	<0.002	<0.002	<0.002	57.9
MW-3	12/8/16	<0.002	<0.002	<0.002	<0.002	60.6
MW-3	6/14/17	<0.002	<0.002	<0.002	<0.002	55.0
MW-3	11/29/17	<0.002	<0.002	<0.002	<0.002	49.8
MW-3	6/14/18	<0.002	<0.002	<0.002	<0.002	50.6
MW-3	12/13/18	<0.0020	<0.0020	<0.002	<0.002	50.0
MW-3	5/6/19	<0.0020	<0.0020	<0.0020	<0.0020	53.0
MW-3	11/19/19	<0.0010	<0.0010	<0.0010	<0.0020	59.0
MW-3	6/23/20	<0.00018	<0.00020	<0.00021	<0.00037	140
MW-3	5/19/21	0.000457 J	<0.000412	<0.000160	<0.000510	75
MW-3	6/8/22	<0.000190	<0.000412	<0.000160	<0.000510	74.6

Appendix E
Cumulative Groundwater Analytical Data
Chevron Environmental Management Company
Former New Mexico "F" State Tank Battery
Lea County, New Mexico



Sample ID	Sample Date	Benzene	Toluene	Ethylbenzene	Total Xylenes	Chloride
New Mexico Water Quality Control Commission Groundwater Standard						
		0.005 ¹	1.0 ¹	0.7 ¹	0.62 ¹	250 ²
MW-4	7/28/98	<0.001	<0.001	<0.001	<0.001	94
MW-4	2/16/01	<0.005	<0.005	<0.005	0.008	170
MW-4	6/12/02	<0.005	<0.005	<0.005	<0.005	85.6
MW-4	11/26/03	0.002	<0.001	<0.001	<0.005	160
MW-4	6/6/03	<0.001	<0.001	<0.001	0.0026	111
MW-4	12/4/03	0.0015	<0.001	<0.001	<0.001	104
MW-4	7/2/04	<0.001	<0.001	<0.001	<0.001	72.4
MW-4	12/21/04	<0.005	<0.005	<0.005	<0.005	59.7
MW-4	6/6/05	<0.001	<0.001	<0.001	<0.001	58.4
MW-4	12/13/05	<0.005	<0.005	<0.005	<0.010	55.3
MW-4	6/27/06	0.000597	<0.0005	<0.0005	<0.001	48.8
MW-4	12/19/06	<0.005	<0.005	<0.005	<0.001	34
MW-4	6/27/07	<0.005	<0.005	<0.005	<0.010	39
MW-4	12/13/07	0.000968	<0.000500	<0.000500	0.00254	63.1
MW-4	6/5/08	<0.00037	<0.00039	<0.00042	<0.00035	61
MW-4	11/14/08	<0.00037	<0.00039	<0.00042	<0.00035	52
MW-4	6/16/09	<0.00037	<0.00039	<0.00042	<0.00035	59
MW-4	11/20/09	<0.00037	<0.00039	<0.00042	<0.00035	58
MW-4	7/1/10	0.00032J	<0.00020	<0.00020	<0.00070	54.5
MW-4	11/9/10	<0.0001	<0.0001	<0.0001	<0.0003	57.5
DUP	11/9/10	<0.0001	<0.0001	<0.0001	<0.0003	58.4
MW-4	6/2/11	<0.0001	<0.0001	<0.0001	<0.0003	49.8
MW-4	12/2/11	<0.0001	<0.0001	<0.0001	<0.0003	142
MW-4	6/26/12	<0.0001	<0.0001	<0.0001	<0.0001	73.7
MW-4	11/26/12	<0.0001	<0.0001	<0.0001	<0.0001	69.3
MW-4	6/14/13	<0.001	<0.002	<0.001	<0.001	59.5
MW-4	11/27/13	<0.001	<0.002	<0.001	<0.001	65.1
MW-4	8/1/14	<0.001	<0.002	<0.001	<0.003	71.8
MW-4	12/12/14	<0.001	<0.002	<0.001	<0.003	104
MW-4	6/9/15	<0.0001	<0.0001	<0.0001	<0.0003	98.5
MW-4	12/9/15	<0.0001	<0.0001	<0.0001	<0.0003	70.6
MW-4	6/21/16	<0.002	<0.002	<0.002	<0.002	60.9
MW-4	12/8/16	<0.002	<0.002	<0.002	<0.002	86.2
MW-4	6/14/17	<0.002	<0.002	<0.002	<0.002	86.4
MW-4	11/29/17	<0.002	<0.002	<0.002	<0.002	81.7
MW-4	6/14/18	<0.002	<0.002	<0.002	<0.002	96.4
MW-4	12/13/18	<0.002	<0.002	<0.002	<0.002	77.6
MW-4	5/6/19	<0.002	<0.002	<0.002	<0.002	54.6
MW-4	11/19/19	<0.0010	<0.0010	<0.0010	<0.002	99
MW-4	6/23/20	<0.00018	<0.00020	<0.00021	<0.00037	130
MW-4	5/19/21	0.000206 J	<0.000412	<0.000160	<0.000510	77.4
MW-4	6/8/22	<0.000190	<0.000412	<0.000160	<0.000510	84.8

Appendix E
Cumulative Groundwater Analytical Data
Chevron Environmental Management Company
Former New Mexico "F" State Tank Battery
Lea County, New Mexico



Sample ID	Sample Date	Benzene	Toluene	Ethylbenzene	Total Xylenes	Chloride
New Mexico Water Quality Control Commission Groundwater Standard						
		0.005 ¹	1.0 ¹	0.7 ¹	0.62 ¹	250 ²
MW-5	7/28/98	<0.001	<0.001	<0.001	<0.001	360
MW-5	2/16/01	<0.005	<0.005	<0.005	<0.005	120
MW-5	6/12/02	<0.005	<0.005	<0.005	<0.005	90.2
MW-5	11/26/03	0.002	<0.001	0.003	<0.002	59.1
MW-5	6/6/03	<0.001	<0.001	<0.001	<0.001	48.6
MW-5	12/4/03	<0.001	<0.001	<0.001	<0.001	36.5
MW-5	7/2/04	<0.005	<0.005	<0.005	<0.005	32.9
MW-5	12/21/04	<0.005	<0.005	<0.005	<0.005	39.8
MW-5	6/6/05	<0.001	<0.001	<0.001	<0.001	41.1
MW-5	12/13/05	<0.005	<0.005	<0.005	<0.010	39.7
MW-5	6/27/06	<0.0005	<0.0005	<0.0005	<0.001	43.2
MW-5	12/19/06	<0.005	<0.005	<0.005	<0.001	51
MW-5	6/27/07	<0.005	<0.005	<0.005	<0.001	67
MW-5	12/14/07	<0.005	<0.005	<0.005	<0.001	101
MW-5	6/4/08	<0.00037	<0.00039	<0.00042	<0.00035	78.7
MW-5	11/14/08	<0.00037	<0.00039	<0.00042	<0.00035	100
MW-5	6/16/09	<0.00037	<0.00039	<0.00042	<0.00035	140
MW-5	11/20/09	<0.00037	<0.00039	<0.00042	<0.00035	110
MW-5	7/1/10	<0.0002	<0.0002	<0.0002	<0.0007	115
MW-5	11/9/10	<0.0001	<0.0001	<0.0001	<0.0003	168
MW-5	6/2/11	<0.0001	<0.0001	<0.0001	<0.0003	134
MW-5	12/2/11	<0.0001	<0.0001	<0.0001	<0.0003	172
MW-5	6/26/12	<0.0001	<0.0001	<0.0001	<0.0001	137
MW-5	11/26/12	<0.0001	<0.0001	<0.0001	<0.0001	110
MW-5	6/14/13	<0.001	<0.002	<0.001	<0.001	66.6
MW-5	11/27/13	<0.001	<0.002	<0.001	<0.001	72.3
MW-5	8/1/14	<0.001	<0.002	<0.001	<0.003	69.5
MW-5	12/12/14	<0.001	<0.002	<0.001	<0.003	66.9
MW-5	6/9/15	<0.001	<0.002	<0.001	<0.003	69.1
MW-5	12/9/15	<0.001	<0.002	<0.001	<0.003	44
MW-5	6/21/16	<0.002	<0.002	<0.002	<0.002	39.9
MW-5	12/8/16	<0.002	<0.002	<0.002	<0.002	39.1
MW-5	6/14/17	<0.002	<0.002	<0.002	<0.002	42.1
MW-5	11/29/17	<0.002	<0.002	<0.002	<0.002	35.6
MW-5	6/14/18	<0.002	<0.002	<0.002	<0.002	37.6
MW-5	12/13/18	<0.002	<0.002	<0.002	<0.002	37.4
MW-5	5/6/19	<0.002	<0.002	<0.002	<0.002	114.0
MW-5	11/19/19	<0.0010	<0.0010	<0.0010	<0.002	49.0
MW-5	6/23/20	<0.00018	<0.00020	<0.00021	<0.00037	80
MW-5	5/19/21	<0.000190	<0.000412	<0.000160	<0.000510	60
MW-5	11/4/21	0.000199 B J	<0.000412	<0.000160	<0.000510	67
MW-5	6/8/22	<0.000190	<0.000412	<0.000160	<0.000510	73.5
MW-5	11/18/22	<0.000190	<0.000412	0.000287 B J	<0.000510	80.4

Appendix E
Cumulative Groundwater Analytical Data
Chevron Environmental Management Company
Former New Mexico "F" State Tank Battery
Lea County, New Mexico



Sample ID	Sample Date	Benzene	Toluene	Ethylbenzene	Total Xylenes	Chloride
New Mexico Water Quality Control Commission Groundwater Standard						
		0.005 ¹	1.0 ¹	0.7 ¹	0.62 ¹	250 ²
MW-6	7/28/98	<0.001	<0.001	<0.001	<0.001	43.0
MW-6	2/16/01	<0.005	<0.005	0.006	0.006	52
MW-6	6/12/02	<0.001	<0.001	<0.001	<0.001	54.1
MW-6	11/26/03	<0.001	<0.001	<0.001	<0.002	65
MW-6	6/6/03	<0.001	<0.001	<0.001	<0.001	43.7
MW-6	12/4/03	<0.001	<0.001	<0.001	<0.001	45.3
MW-6	7/2/04	<0.001	<0.001	<0.001	<0.001	57.5
MW-6	12/21/04	<0.005	<0.005	<0.005	<0.005	61.3
MW-6	6/6/05	<0.001	<0.001	<0.001	<0.001	66.7
MW-6	12/13/05	<0.005	<0.005	<0.005	<0.010	80.9
MW-6	6/27/06	<0.0005	<0.0005	<0.0005	<0.001	86.4
MW-6	12/19/06	<0.005	<0.005	<0.005	<0.001	88
MW-6	3/16/07	<0.0005	<0.0005	<0.0005	<0.001	92.2
MW-6	6/27/07	<0.0005	<0.0005	<0.0005	<0.001	110
MW-6	9/27/07	<0.0005	<0.0005	<0.0005	<0.001	99.5
MW-6	12/14/07	<0.0005	<0.0005	<0.0005	<0.001	99.2
MW-6	3/6/08	<0.00037	<0.00039	<0.00042	<0.00035	88.8
MW-6	6/4/08	<0.00037	<0.00039	<0.00042	<0.00035	117
MW-6	9/4/08	<0.00037	<0.00039	<0.00042	<0.00035	130
MW-6	11/14/08	<0.00037	<0.00039	<0.00042	<0.00035	130
MW-6	3/5/09	<0.00037	<0.00039	<0.00042	<0.00035	140
MW-6	6/16/09	<0.00037	<0.00039	<0.00042	<0.00035	160
MW-6	9/9/09	<0.00037	<0.00039	<0.00042	<0.00035	160
MW-6	11/20/09	<0.00037	<0.00039	<0.00042	<0.00035	140
MW-6	3/23/10	<0.0002	<0.0002	<0.0002	<0.0007	169
MW-6	7/1/10	<0.0002	<0.0002	<0.0002	<0.0007	161
DUP	7/1/10	<0.0002	<0.0002	<0.0002	<0.0007	169
MW-6	9/22/10	0.00033J	<0.0001	<0.0001	<0.0003	157
MW-6	11/9/10	<0.0001	<0.0001	0.0010	<0.0003	182
MW-6	3/3/11	<0.0001	<0.0001	<0.0001	<0.0003	225
MW-6	6/2/11	<0.0001	<0.0001	<0.0001	<0.0003	215
DUP	6/2/11	<0.0001	<0.0001	<0.0001	<0.0003	221
MW-6	9/27/11	<0.0001	<0.0001	<0.0001	<0.0003	222
MW-6	12/2/11	<0.0001	<0.0001	<0.0001	<0.0003	198
MW-6	3/7/12	<0.0001	<0.0001	<0.0001	<0.0001	189
MW-6	6/26/12	<0.0001	<0.0001	<0.0001	<0.0001	259
DUP	6/26/12	<0.0001	<0.0001	<0.0001	<0.0001	260
MW-6	9/20/12	<0.0001	<0.0001	<0.0001	<0.0001	221
MW-6	11/26/12	<0.0001	<0.0001	<0.0001	<0.0001	176
MW-6	3/14/13	<0.001	<0.002	<0.001	<0.001	195

Appendix E
Cumulative Groundwater Analytical Data
Chevron Environmental Management Company
Former New Mexico "F" State Tank Battery
Lea County, New Mexico



Sample ID	Sample Date	Benzene	Toluene	Ethylbenzene	Total Xylenes	Chloride
New Mexico Water Quality Control Commission Groundwater Standard						
		0.005 ¹	1.0 ¹	0.7 ¹	0.62 ¹	250 ²
MW-6	6/14/13	<0.001	<0.002	<0.001	<0.001	219
MW-6	9/13/13	<0.001	<0.002	<0.001	<0.001	209
MW-6	11/27/13	<0.001	<0.002	<0.001	<0.001	220
MW-6	3/21/14	<0.001	<0.002	<0.001	<0.003	231
MW-6	8/1/14	<0.001	<0.002	<0.001	<0.003	220
MW-6	9/22/14	<0.001	<0.002	<0.001	<0.003	186
MW-6	12/12/14	<0.001	<0.002	<0.001	<0.003	217
MW-6	3/31/15	<0.001	<0.002	<0.001	<0.003	201
MW-6	6/9/15	<0.001	<0.002	<0.001	<0.003	209
MW-6	9/16/15	<0.001	<0.002	<0.001	<0.003	212
MW-6	12/9/15	<0.001	<0.002	<0.001	<0.003	175
MW-6	3/7/16	<0.001	<0.002	<0.001	<0.001	218
MW-6	6/21/16	<0.002	<0.002	<0.002	<0.002	201
MW-6	8/31/16	<0.002	<0.002	<0.002	<0.002	222
MW-6	12/8/16	<0.002	<0.002	<0.002	<0.002	190
MW-6	3/9/17	<0.002	<0.002	<0.002	<0.002	182
MW-6	6/14/17	<0.002	<0.002	<0.002	<0.002	168
MW-6	9/5/17	<0.002	<0.002	<0.002	<0.002	151
MW-6	11/29/17	<0.002	<0.002	<0.002	<0.002	124
MW-6	3/22/18	<0.002	<0.002	<0.002	<0.002	127
MW-6	6/14/18	<0.002	<0.002	<0.002	<0.002	110
MW-6	9/6/18	<0.002	<0.002	<0.002	<0.002	106
MW-6	12/14/18	<0.002	<0.002	<0.002	<0.002	78.7
MW-6	2/7/19	<0.002	<0.002	<0.002	<0.002	100.0
MW-6	5/6/19	<0.002	<0.002	<0.002	<0.002	108.0
MW-6	8/2/19	<0.002	<0.002	<0.002	<0.002	112.0
DUP	8/2/19	<0.002	<0.002	<0.002	<0.002	115.0
MW-6	11/19/19	<0.0010	<0.0010	<0.0010	<0.002	80.0
MW-6	3/27/20	<0.00018	<0.00020	<0.00021	<0.00037	80 F1
MW-6	6/23/20	<0.00018	<0.00020	<0.00021	<0.00037	110 F1
MW-6	8/21/20	<0.00018	<0.00020	<0.00021	<0.00037	110.0
MW-6	11/11/20	<0.00018	<0.00020	<0.00021	<0.00037	91 H
MW-6	3/16/21	<0.000190	<0.000412	<0.000160	<0.000510	73.8
MW-6	5/19/21	<0.000190	<0.000412	<0.000160	<0.000510	77.4
MW-6	7/19/21	<0.000190	<0.000412	<0.000160	<0.000510	75.4
MW-6	11/4/21	0.000288 BJ	<0.000412	<0.000160	<0.000510	87.6
MW-6	3/8/22	<0.000190	<0.000412	<0.000160	<0.000510	82.3
MW-6	6/8/22	<0.000190	<0.000412	<0.000160	<0.000510	68.4
MW-6	8/15/22	<0.000190	<0.000412	<0.000160	<0.000510	75.6
MW-6	11/18/22	<0.000190	<0.000412	0.000286 B J	<0.000510	73.8
MW-7	7/28/98	<0.001	<0.001	<0.001	<0.001	82
MW-7	2/16/01	<0.005	<0.005	<0.005	<0.005	150
MW-7	6/12/02	<0.005	<0.005	<0.005	<0.005	96.7
MW-7	11/26/03	<0.001	<0.001	<0.001	<0.002	133
MW-7	6/6/03	<0.001	<0.001	<0.001	<0.001	199
MW-7	12/4/03	<0.001	<0.001	<0.001	<0.001	230
MW-7	7/2/04	<0.001	<0.001	<0.001	<0.001	215
MW-7	12/21/04	<0.005	<0.005	<0.005	<0.005	274
MW-7	6/6/05	<0.001	<0.001	<0.001	<0.001	221
MW-7	12/13/05	<0.005	<0.005	<0.005	<0.010	204
MW-7	6/27/06	<0.0005	<0.0005	<0.0005	<0.001	158
MW-7	12/19/06	<0.005	<0.005	<0.005	<0.001	130
MW-7	6/27/07	<0.0005	<0.0005	<0.0005	<0.001	110
MW-7	12/13/07	<0.0005	<0.0005	<0.0005	<0.001	135
MW-7	6/5/08	<0.00037	<0.00039	<0.00042	<0.00035	72.4

Appendix E
Cumulative Groundwater Analytical Data
Chevron Environmental Management Company
Former New Mexico "F" State Tank Battery
Lea County, New Mexico



Sample ID	Sample Date	Benzene	Toluene	Ethylbenzene	Total Xylenes	Chloride
New Mexico Water Quality Control Commission Groundwater Standard						
		0.005 ¹	1.0 ¹	0.7 ¹	0.62 ¹	250 ²
MW-7	11/14/08	<0.00037	<0.00039	<0.00042	<0.00035	66
MW-7	6/16/09	<0.00037	<0.00039	<0.00042	<0.00035	58
MW-7	11/20/09	<0.00037	<0.00039	<0.00042	<0.00035	47
MW-7	7/1/10	<0.0002	<0.0002	<0.0002	<0.0007	51.2
MW-7	11/9/10	<0.0001	<0.0001	<0.0001	<0.0003	67.1
MW-7	6/2/11	<0.0001	<0.0001	<0.0001	<0.0003	69.4
MW-7	12/2/11	<0.0001	<0.0001	<0.0001	<0.0003	76.6
MW-7	6/26/12	<0.0001	<0.0001	<0.0001	<0.0001	91.5
MW-7	11/26/12	<0.0001	<0.0001	<0.0001	<0.0001	67.7
MW-7	6/14/13	<0.001	<0.002	<0.001	<0.001	56.4
MW-7	11/27/13	<0.001	<0.002	<0.001	<0.001	78.1
MW-7	8/1/14	<0.001	<0.002	<0.001	<0.003	68.3
MW-7	12/12/14	<0.001	<0.002	<0.001	<0.003	122
MW-7	6/9/15	<0.001	<0.002	<0.001	<0.003	79.2
MW-7	12/9/15	<0.001	<0.002	<0.001	<0.003	94
MW-7	6/21/16	<0.002	<0.002	<0.002	<0.002	52.3
MW-7	12/8/16	<0.002	<0.002	<0.002	<0.002	69.0
MW-7	6/14/17	<0.002	<0.002	<0.002	<0.002	68.6
MW-7	11/29/17	<0.002	<0.002	<0.002	<0.002	62.6
MW-7	6/14/18	<0.002	<0.002	<0.002	<0.002	58.5
MW-7	12/13/18	<0.002	<0.002	<0.002	<0.002	49.9
MW-7	5/6/19	<0.002	<0.002	<0.002	<0.002	58.7
MW-7	11/19/19	<0.0010	<0.0010	<0.0010	<0.002	50.0
MW-7	6/23/20	<0.00018	<0.00020	0.00034 J	<0.00037	61
MW-7	5/19/21	<0.000190	<0.000412	<0.000160	<0.000510	48
Dup	5/19/21	<0.000190	<0.000412	<0.000160	<0.000510	48
MW-7	6/8/22	<0.000190	<0.000412	<0.000160	<0.000510	62.5
MW-8	7/28/98	<0.001	<0.001	<0.001	<0.001	29
MW-8	2/16/01	<0.005	<0.005	<0.005	<0.005	94
MW-8	6/12/02	<0.005	<0.005	<0.005	<0.005	180
MW-8	11/26/03	<0.001	<0.001	<0.001	<0.002	239
MW-8	6/6/03	<0.001	<0.001	<0.001	<0.001	244
MW-8	12/4/03	<0.001	<0.001	<0.001	<0.001	251
MW-8	7/2/04	<0.005	<0.005	<0.005	<0.005	206
MW-8	12/21/04	<0.005	<0.005	<0.005	<0.005	244
MW-8	6/6/05	<0.0001	<0.0001	<0.0001	<0.0001	227
MW-8	12/13/05	<0.005	<0.005	<0.005	<0.010	144
MW-8	6/27/06	<0.0005	<0.0005	<0.0005	<0.001	92.6
MW-8	12/19/06	<0.005	<0.005	<0.005	<0.001	83.0
MW-8	6/27/07	<0.0005	<0.0005	<0.0005	<0.001	79
MW-8	12/13/07	<0.0005	<0.0005	<0.0005	<0.001	82.9
MW-8	6/4/08	<0.00037	<0.00039	<0.00042	<0.00035	54.9
MW-8	11/14/08	<0.00037	<0.00039	<0.00042	<0.00035	47
MW-8	6/16/09	<0.00037	<0.00039	<0.00042	<0.00035	45

Appendix E
Cumulative Groundwater Analytical Data
Chevron Environmental Management Company
Former New Mexico "F" State Tank Battery
Lea County, New Mexico



Sample ID	Sample Date	Benzene	Toluene	Ethylbenzene	Total Xylenes	Chloride
New Mexico Water Quality Control Commission Groundwater Standard						
		0.005 ¹	1.0 ¹	0.7 ¹	0.62 ¹	250 ²
MW-8	11/20/09	<0.00037	<0.00039	<0.00042	<0.00035	36
MW-8	7/1/10	<0.0002	<0.0002	<0.0002	<0.0007	38.4
MW-8	11/9/10	<0.0001	<0.0001	<0.0001	<0.0003	47.6
MW-8	6/2/11	<0.0001	<0.0001	<0.0001	<0.0003	51.8
MW-8	12/2/11	<0.0001	<0.0001	<0.0001	<0.0003	72.7
MW-8	6/26/12	<0.0001	<0.0001	<0.0001	<0.0001	95.7
MW-8	11/26/12	<0.0001	<0.0001	<0.0001	<0.0001	77.6
MW-8	6/14/13	<0.001	<0.002	<0.001	<0.001	83.3
DUP	6/14/13	<0.001	<0.002	<0.001	<0.001	84.3
MW-8	11/27/13	<0.001	<0.002	<0.001	<0.001	72.2
DUP	11/27/13	<0.001	<0.002	<0.001	<0.001	71.3
MW-8	8/1/14	<0.001	<0.002	<0.001	<0.003	63.2
MW-8	12/12/14	<0.001	<0.002	<0.001	<0.003	82.8
MW-8	6/9/15	<0.0001	<0.0001	<0.0001	<0.0003	79.8
DUP	6/9/15	<0.0001	<0.0001	<0.0001	<0.0003	84.6
MW-8	12/9/15	<0.0001	<0.0001	<0.0001	<0.0003	69.9
DUP	12/9/15	<0.0001	<0.0001	<0.0001	<0.0003	68.0
MW-8	6/21/16	<0.002	<0.002	<0.002	<0.002	74.4
DUP	6/21/16	<0.002	<0.002	<0.002	<0.002	68.0
MW-8	12/8/16	<0.002	<0.002	<0.002	<0.002	71.4
DUP	12/8/16	<0.002	<0.002	<0.002	<0.002	72.2
MW-8	6/14/17	<0.002	<0.002	<0.002	<0.002	67.1
DUP	6/14/17	<0.002	<0.002	<0.002	<0.002	63.8
MW-8	11/29/17	<0.002	<0.002	<0.002	<0.002	58.7
MW-8	6/14/18	<0.002	<0.002	<0.002	<0.002	68.0
DUP	6/14/18	<0.002	<0.002	<0.002	<0.002	67.9
MW-8	12/13/18	<0.002	<0.002	<0.002	<0.002	62.6
DUP	12/13/18	<0.002	<0.002	<0.002	<0.002	61.5
MW-8	5/6/19	<0.002	<0.002	<0.002	<0.002	102.0
MW-8	11/19/19	<0.0010	<0.0010	<0.0010	<0.002	65.0
MW-8	6/23/20	<0.00018	<0.00020	<0.00021	<0.00037	89.0
MW-8	5/19/21	<0.000190	<0.000412	<0.000160	<0.000510	46.9
MW-8	6/8/22	<0.000190	<0.000412	<0.000160	<0.000510	51.6
MW-9R	6/9/15	<0.0001	<0.0001	<0.0001	<0.0003	145
MW-9R	12/9/15	<0.0001	<0.0001	<0.0001	<0.0003	119
MW-9R	6/21/16	<0.002	<0.002	<0.002	<0.002	109
MW-9R	12/8/16	<0.002	<0.002	<0.002	<0.002	120
MW-9R	6/14/17	<0.002	<0.002	<0.002	<0.002	115
MW-9R	11/29/17	<0.002	<0.002	<0.002	<0.002	98
MW-9R	6/15/18	<0.002	<0.002	<0.002	<0.002	92.2
MW-9R	12/13/18	<0.002	<0.002	<0.002	<0.002	84.0
MW-9R	5/6/19	<0.002	<0.002	<0.002	<0.002	94.1
MW-9R	11/19/19	<0.0010	<0.0010	<0.0010	<0.002	110.0
MW-9R	6/23/20	<0.00018	<0.00020	<0.00021	<0.00037	170
DUP	6/23/20	<0.00018	<0.00020	<0.00021	<0.00037	160
MW-9R	5/19/21	<0.000190	<0.000412	<0.000160	<0.000510	104
MW-9R	11/4/21	0.000274 B J	<0.000412	<0.000160	<0.000510	110
MW-9R	6/8/22	<0.000190	<0.000412	<0.000160	<0.000510	104
MW-9R	11/18/22	<0.000190	<0.000412	0.000288 B J	<0.000510	97.0

Appendix E
Cumulative Groundwater Analytical Data
Chevron Environmental Management Company
Former New Mexico "F" State Tank Battery
Lea County, New Mexico



Sample ID	Sample Date	Benzene	Toluene	Ethylbenzene	Total Xylenes	Chloride
New Mexico Water Quality Control Commission Groundwater Standard						
		0.005 ¹	1.0 ¹	0.7 ¹	0.62 ¹	250 ²
WW-1	7/28/98	<0.001	<0.001	<0.001	<0.001	100
WW-1	6/12/02	<0.001	<0.001	<0.001	<0.001	43.6
WW-1	11/26/02	<0.001	<0.001	<0.001	<0.002	80
WW-1	6/6/03	<0.001	<0.001	<0.001	<0.001	73.4
WW-1	12/4/03	<0.001	<0.001	<0.001	<0.001	65.3
WW-1	7/2/04	<0.001	<0.001	<0.001	<0.001	66.5
WW-1	12/21/04	<0.005	<0.005	<0.005	<0.005	74.3
WW-1	6/6/05	<0.0001	<0.0001	<0.0001	<0.0001	63.4
WW-1	12/13/05	<0.005	<0.005	<0.005	<0.010	41.1
WW-1	6/27/06	<0.0005	<0.0005	<0.0005	<0.001	50
WW-1	12/19/06	<0.005	<0.005	<0.005	<0.001	80.0
WW-1	6/27/07	<0.0005	<0.0005	<0.0005	<0.001	52
WW-1	12/14/07	<0.0005	<0.0005	<0.0005	<0.001	59.8
WW-1	6/4/08	<0.00037	<0.00039	<0.00042	<0.00035	64.1
DUP	6/4/08	<0.00037	<0.00039	<0.00042	<0.00035	64.4
WW-1	11/14/08	<0.00037	<0.00039	<0.00042	<0.00035	73
WW-1	6/17/09	<0.00037	<0.00039	<0.00042	<0.00035	60
WW-1	11/20/09	<0.00037	<0.00039	<0.00042	<0.00035	64
WW-1	7/1/10	<0.0002	<0.0002	<0.0002	<0.0007	41
WW-1	11/9/10	<0.0001	<0.0001	<0.0001	<0.0003	77
WW-1	6/2/11	<0.0001	<0.0001	<0.0001	<0.0003	73.6
WW-1	12/2/11	<0.0001	<0.0001	<0.0001	<0.0003	50.2
WW-1	6/26/12	<0.0001	<0.0001	<0.0001	<0.0001	90
WW-1	11/26/12	<0.0001	<0.0001	<0.0001	<0.0001	69.9
WW-1	6/14/13	<0.001	<0.002	<0.001	<0.001	53.7
WW-1	11/27/13	not sampled				
WW-1	8/1/14	<0.001	<0.002	<0.001	<0.003	56.4
WW-1	12/12/14	<0.001	<0.002	<0.001	<0.003	71.6
WW-1	6/9/15	<0.0001	<0.0001	<0.0001	<0.0003	64.8
WW-1	12/9/15	<0.0001	<0.0001	<0.0001	<0.0003	45
WW-1	6/21/16	<0.002	<0.002	<0.002	<0.002	37.0
WW-1	12/8/16	<0.002	<0.002	<0.002	<0.002	42.1
WW-1	6/14/17	<0.002	<0.002	<0.002	<0.002	34.0
WW-1	11/29/17	<0.002	0.0559	0.225	0.0411	49.4
DUP	11/29/17	<0.002	0.059	0.241	0.0456	49.0
WW-1	12/21/17	<0.002	<0.002	<0.002	<0.002	--
WW-1	6/15/18	<0.002	<0.002	<0.002	<0.002	42.6
WW-1	12/18/18	<0.002	<0.002	<0.002	<0.002	45.3
WW-1	5/6/19	<0.002	<0.002	<0.002	<0.002	60.4
DUP	5/6/19	<0.002	<0.002	<0.002	<0.002	55.5
WW-1	6/23/20	<0.00018	<0.00020	<0.00021	<0.00037	84

Appendix E
Cumulative Groundwater Analytical Data
Chevron Environmental Management Company
Former New Mexico "F" State Tank Battery
Lea County, New Mexico



Sample ID	Sample Date	Benzene	Toluene	Ethylbenzene	Total Xylenes	Chloride
New Mexico Water Quality Control Commission Groundwater Standard						
		0.005 ¹	1.0 ¹	0.7 ¹	0.62 ¹	250 ²
WW-2	6/12/02	<0.001	<0.001	<0.001	<0.001	53.7
WW-2	11/26/02	<0.001	<0.001	<0.001	<0.002	70.9
WW-2	6/6/03	<0.001	<0.001	<0.001	<0.001	71.1
WW-2	12/4/03	<0.001	<0.001	<0.001	<0.001	52.4
WW-2	7/2/04	<0.001	<0.001	<0.001	<0.001	51.0
WW-2	12/21/04	<0.005	<0.005	<0.005	<0.005	55.6
WW-2	6/6/05	<0.001	<0.001	<0.001	<0.001	55.3
WW-2	12/13/05	<0.005	<0.005	<0.005	<0.010	75.3
WW-2	6/27/06	<0.0005	<0.0005	<0.0005	<0.001	69.7
WW-2	12/19/06	<0.005	<0.005	<0.005	<0.001	57.0
WW-2	6/27/07	<0.0005	<0.0005	<0.0005	<0.001	46
WW-2	12/14/07	<0.0005	<0.0005	<0.0005	<0.001	83.1
WW-2	6/4/08	<0.00037	<0.00039	<0.00042	<0.00035	65.9
WW-2	11/14/08	<0.00037	<0.00039	<0.00042	<0.00035	73
WW-2	6/17/09	<0.00037	<0.00039	<0.00042	<0.00035	60
WW-2	11/20/09	not sampled				
WW-2	7/1/10	<0.0002	<0.0002	<0.0002	<0.0007	66.3
WW-2	11/9/10	<0.0001	<0.0001	<0.0001	<0.0003	77.2
WW-2	6/2/11	<0.0001	<0.0001	<0.0001	<0.0003	74.9
WW-2	12/2/11	<0.0001	<0.0001	<0.0001	<0.0003	76.5
WW-2	6/26/12	<0.0001	<0.0001	<0.0001	<0.0001	63.1
WW-2	11/26/12	<0.0001	<0.0001	<0.0001	<0.0001	50.3
WW-2	6/14/13	<0.001	<0.002	<0.001	<0.001	81.1
WW-2	11/27/13	not sampled				
WW-2	8/1/14	<0.001	<0.002	<0.001	<0.003	95.5
WW-2	12/12/14	<0.001	<0.002	<0.001	<0.003	112
WW-2	6/9/15	<0.001	<0.002	<0.001	<0.003	108
WW-2	12/9/15	<0.001	<0.002	<0.001	<0.003	45.8
WW-2	6/21/16	<0.002	<0.002	<0.002	<0.002	28.9
WW-2	12/8/16	<0.002	<0.002	<0.002	<0.002	39.1
WW-2	6/14/17	<0.002	<0.002	<0.002	<0.002	29.8
WW-2	11/29/17	<0.002	<0.002	<0.002	<0.002	39.8
WW-2	6/13/18	not sampled				
WW-2	12/14/18	<0.002	0.00715	<0.0020	0.0828	45.9
WW-2	2/7/19	<0.002	<0.002	<0.002	<0.002	41.5
WW-2	5/6/19	<0.002	<0.002	<0.002	<0.002	97.5
RW-1	6/5/08	0.0119	<0.0039	<0.0042	<0.0035	36.2
RW-1	6/17/09	0.012	0.0055	0.0018	0.012	49
RW-1	7/1/10	0.022	0.00070J	0.0027	0.017	41.1
RW-1	6/26/12	0.0113	<0.00100	0.00514	0.0350	44.1
RW-1	6/27/13	0.00745	0.00963	0.0101	0.0549	33.8
RW-1	8/1/14	0.0172	0.00226	0.00499	0.0237	36.2

Appendix E
Cumulative Groundwater Analytical Data
Chevron Environmental Management Company
Former New Mexico "F" State Tank Battery
Lea County, New Mexico



Sample ID	Sample Date	Benzene	Toluene	Ethylbenzene	Total Xylenes	Chloride
New Mexico Water Quality Control Commission Groundwater Standard						
		0.005 ¹	1.0 ¹	0.7 ¹	0.62 ¹	250 ²
RW-1	6/9/15	0.0109	<0.00200	0.00373	0.0182	43.7
RW-1	12/9/15	not sampled				
RW-1	6/21/16	not sampled				
RW-1	12/8/16	0.0137	<0.002	<0.002	0.0089	74.9
RW-1	6/14/17	not sampled				
RW-1	11/29/17	0.0148	<0.002	0.00372	0.0108	101
RW-1	6/14/18	not sampled				
RW-1	12/14/18	<0.002	0.00363	<0.002	0.0137	131
RW-1	5/6/19	LNAPL Present				
RW-1	11/19/19	LNAPL Present				
RW-1	6/23/20	LNAPL Present				
RW-1	11/11/20	LNAPL Present				
RW-1	5/19/21	LNAPL Present				
RW-1	11/4/21	LNAPL Present				
RW-1	6/8/22	LNAPL Present				
RW-1	11/18/22	LNAPL Present				
RW-2	6/27/07	0.00287	<0.0025	<0.0025	0.0303	60
RW-2	6/5/08	<0.0037	<0.0039	<0.0042	<0.0035	51.1
RW-2	6/17/09	<0.00037	0.0046	<0.00042	0.016	44
RW-2	7/1/10	0.0016	<0.0002	<0.0002	0.0067	30.1
RW-2	6/26/12	<0.00100	<0.001	<0.001	0.00362	43.9
RW-2	6/14/13	0.00178	0.00268	0.00171	0.0262	30
RW-2	8/1/14	0.00103	0.00106	<0.001	0.00788	41
RW-2	12/12/14	0.00154	<0.002	<0.001	0.00348	52.7
RW-2	6/9/15	0.00112	<0.002	<0.001	<0.003	49.5
RW-2	12/9/15	<0.00100	<0.002	0.00102	0.00725	48
RW-2	6/21/16	<0.002	<0.002	<0.002	<0.002	44
RW-2	12/8/16	<0.002	<0.002	<0.002	<0.002	55.8
RW-2	6/14/17	0.00408	0.00219	<0.002	<0.002	62.3
RW-2	11/29/17	<0.002	<0.002	<0.002	<0.002	65.0
RW-2	6/15/18	0.00306	<0.002	<0.002	<0.002	72.4
RW-2	12/14/18	<0.002	<0.002	<0.002	0.00215	73.4
RW-2	5/6/19	not sampled				
RW-2	11/19/19	not sampled				
RW-2	6/23/20	<0.00018	<0.00020	<0.00021	<0.00037	120 F1
RW-2	11/11/20	0.00038 J	<0.00020	<0.00021	<0.00037	93 H
RW-2	5/19/21	LNAPL Present				
RW-2	11/4/21	LNAPL Present				
RW-2	6/8/22	LNAPL Present				
RW-2	11/18/22	LNAPL Present				
RW-3	6/11/02	<0.005	<0.005	<0.005	<0.005	25.9
RW-3	12/3/04	<0.001	<0.001	<0.001	<0.001	36.6
RW-3	6/27/07	0.00855	<0.0025	0.0122	0.027	130
RW-3	6/5/08	<0.0037	<0.0039	<0.0042	0.0129	90.6
RW-3	6/17/09	0.0052	0.0042	0.011	0.025	74
RW-3	11/20/09	<0.00037	0.001	0.0027	0.0076	60
DUP	11/20/09	<0.00037	0.0013	0.003	0.008	60
RW-3	7/1/10	0.0065	<0.0002	0.0066	0.003	68.3
RW-3	6/26/12	0.00682	<0.001	<0.001	<0.001	55.4
RW-3	6/14/13	0.0092	0.0291	0.0253	0.138	37.3
RW-3	8/1/14	0.00709	<0.002	<0.001	0.132	41.5
RW-3	12/12/14	0.00588	<0.002	<0.001	0.00691	47.7
RW-3	6/9/15	0.00512	<0.002	<0.001	0.00309	40
RW-3	12/9/15	0.00432	<0.002	<0.001	<0.003	39
RW-3	6/21/16	0.00408	<0.002	<0.002	<0.002	36.3

Appendix E
Cumulative Groundwater Analytical Data
Chevron Environmental Management Company
Former New Mexico "F" State Tank Battery
Lea County, New Mexico



Sample ID	Sample Date	Benzene	Toluene	Ethylbenzene	Total Xylenes	Chloride
New Mexico Water Quality Control Commission Groundwater Standard						
		0.005 ¹	1.0 ¹	0.7 ¹	0.62 ¹	250 ²
RW-3	12/8/16	0.00574	<0.002	<0.002	0.00265	45.3
RW-3	6/14/17	0.00850	<0.002	<0.002	<0.002	43.4
RW-3	11/29/17	0.00563	<0.002	<0.002	<0.002	49.1
RW-3	6/15/18	<0.002	<0.002	<0.002	<0.002	53.1
RW-3	12/14/18	0.00262	<0.002	<0.002	0.00322	55.4
RW-3	5/6/19	not sampled				
RW-3	11/19/19	not sampled				
RW-3	6/23/20	<0.00018	<0.00020	<0.00021	0.0020	100
RW-3	11/11/20	0.00025 J	<0.00020	0.00032 J	0.0034	68 H
RW-3	5/19/21	LNAPL Present				
RW-3	11/4/21	LNAPL Present				
RW-3	6/8/22	LNAPL Present				
RW-3	11/18/22	LNAPL Present				
RW-4	6/26/12	0.00221	<0.001	0.00410	0.0188	65.1
RW-4	6/27/13	0.0245	0.0396	0.0779	0.196	43.1
RW-4	8/1/14	0.0155	0.00107	0.00766	0.0286	34.2
RW-4	6/9/15	0.0127	<0.002	0.00752	0.030	39.5
RW-4	12/9/15	not sampled				
RW-4	6/21/16	not sampled				
RW-4	12/8/16	0.0139	<0.002	0.00758	0.03070	45.7
RW-4	6/14/17	not sampled				
RW-4	11/29/17	0.0268	0.00761	0.03040	0.1310	48.9
RW-4	6/14/18	LNAPL Present				
RW-4	12/14/18	LNAPL Present				
RW-4	5/6/19	LNAPL Present				
RW-4	11/19/19	LNAPL Present				
RW-4	6/23/20	LNAPL Present				
RW-4	11/11/20	LNAPL Present				
RW-4	5/19/21	LNAPL Present				
RW-4	11/4/21	LNAPL Present				
RW-4	6/8/22	LNAPL Present				
RW-4	11/18/22	LNAPL Present				

Notes:

Results shown in mg/L.

Data through June 6, 2005 provided by Larson & Associates, Inc.

Bold indicates results exceed New Mexico Water Quality Control Commission (NMWQCC).

J = Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

H = Sample was prepped or analyzed beyond the specified holding time

F1 = MS and/or MSD recovery exceeds control limits.

¹Human Health Standards for Groundwater.

²Other Standards for Domestic Water Supply.

³RW-1 and RW-4 were sampled by dropping a disposable PVC bailer below the level of LNAPL.

⁴MW-9R was installed May 19, 2015.

⁵ Sample was analyzed as a solid instead of a water due to oily nature of sample and results are in mg/kg.

Appendix E
Cumulative LNAPL Analytical Results
Chevron Environmental Management Company
Former New Mexico "F" State Tank Battery
Lea County, New Mexico



Sample ID	Sample Date	Benzene	Toluene	Ethylbenzene	Total Xylenes
LNAPL Analytical Results					
RW-1 ¹	11/19/19	6	2.8	25	100
RW-4 ²	11/19/19	0.014J	0.005U	0.013J	0.049J

Notes:

¹Sample was analyzed as a solid instead of a water due to oily nature of sample. Results shown in mg/kg.

²Results shown in mg/L.

RW-1 and RW-4 LNAPL was sampled using a disposable PVC bailer.

Appendix F

Analytical Reports



ANALYTICAL REPORT

March 14, 2022

Arcadis - Chevron - NM

Sample Delivery Group: L1469352
Samples Received: 03/09/2022
Project Number: 30123982-0003
Description: NM F- State Tank Battery
Site: NM F-STATE
Report To: Andrew DeMarco
1004 N Big Spring Street
Suite 121
Midland, TX 79701

¹Cp²Tc³Ss⁴Cn⁵Sr⁶Qc⁷Gl⁸Al⁹Sc

Entire Report Reviewed By:

Chris McCord
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

Cp: Cover Page	1	¹ Cp
Tc: Table of Contents	2	
Ss: Sample Summary	3	² Tc
Cn: Case Narrative	4	
Sr: Sample Results	5	³ Ss
MW-6-W-220308 L1469352-01	5	
Qc: Quality Control Summary	6	⁴ Cn
Wet Chemistry by Method 300.0	6	⁵ Sr
Volatile Organic Compounds (GC) by Method 8021B	7	
Gl: Glossary of Terms	8	⁶ Qc
Al: Accreditations & Locations	9	⁷ Gl
Sc: Sample Chain of Custody	10	⁸ Al
		⁹ Sc

MW-6-W-220308 L1469352-01 GW

Collected by Cory Rodriguez
Collected date/time 03/08/22 11:54
Received date/time 03/09/22 13:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 300.0	WG1829960	5	03/09/22 22:26	03/09/22 22:26	LBR	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8021B	WG1830795	1	03/12/22 17:38	03/12/22 17:38	DWR	Mt. Juliet, TN

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Chris McCord
Project Manager

- ¹ Cp
- ² Tc
- ³ Ss
- ⁴ Cn
- ⁵ Sr
- ⁶ Qc
- ⁷ Gl
- ⁸ Al
- ⁹ Sc

MW-6-W-220308

Collected date/time: 03/08/22 11:54

L1469352

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Chloride	82.3		1.90	5.00	5	03/09/2022 22:26	WG1829960

Volatile Organic Compounds (GC) by Method 8021B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Benzene	U		0.000190	0.000500	1	03/12/2022 17:38	WG1830795
Toluene	U		0.000412	0.00100	1	03/12/2022 17:38	WG1830795
Ethylbenzene	U		0.000160	0.000500	1	03/12/2022 17:38	WG1830795
Total Xylene	U		0.000510	0.00150	1	03/12/2022 17:38	WG1830795
(S) a,a,a-Trifluorotoluene(PID)	102			79.0-125		03/12/2022 17:38	WG1830795

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Wet Chemistry by Method 300.0

L1469352-01

Method Blank (MB)

(MB) R3768399-1 03/09/22 14:08

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Chloride	U		0.379	1.00

L1469357-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1469357-01 03/09/22 22:53 • (DUP) R3768399-3 03/09/22 23:33

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	2.66	2.36	1	12.0		20

L1469364-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1469364-04 03/10/22 01:34 • (DUP) R3768399-6 03/10/22 02:14

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	11.0	11.4	1	3.48		20

Laboratory Control Sample (LCS)

(LCS) R3768399-2 03/09/22 14:21

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40.0	40.4	101	90.0-110	

L1469357-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1469357-01 03/09/22 22:53 • (MS) R3768399-4 03/09/22 23:46 • (MSD) R3768399-5 03/10/22 00:00

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	50.0	2.66	52.2	52.4	99.2	99.5	1	80.0-120			0.310	20

L1469364-04 Original Sample (OS) • Matrix Spike (MS)

(OS) L1469364-04 03/10/22 01:34 • (MS) R3768399-7 03/10/22 02:27

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	50.0	11.0	61.7	101	1	80.0-120	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Volatile Organic Compounds (GC) by Method 8021B

L1469352-01

Method Blank (MB)

(MB) R3769325-3 03/12/22 11:37

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Benzene	U		0.000190	0.000500
Toluene	U		0.000412	0.00100
Ethylbenzene	U		0.000160	0.000500
Total Xylene	U		0.000510	0.00150
(S) a,a,a-Trifluorotoluene(PID)	102			79.0-125

1
Cp

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Tc

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Ss

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Cn

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Sr

6
Qc

7
Gl

8
Al

9
Sc

Laboratory Control Sample (LCS)

(LCS) R3769325-1 03/12/22 09:50

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.0500	0.0525	105	77.0-122	
Toluene	0.0500	0.0515	103	80.0-121	
Ethylbenzene	0.0500	0.0557	111	80.0-123	
Total Xylene	0.150	0.162	108	47.0-154	
(S) a,a,a-Trifluorotoluene(PID)			100	79.0-125	

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier Description

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122


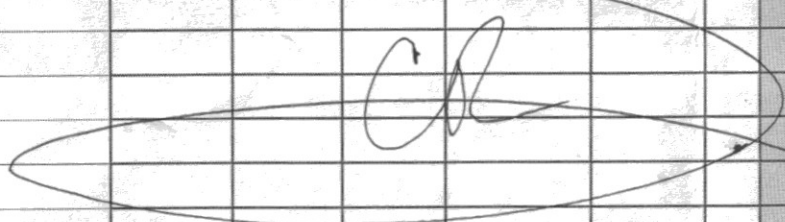
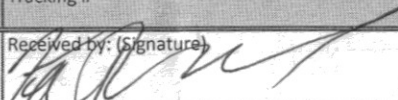
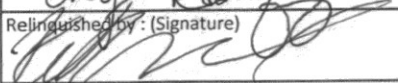
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California	2932	New Mexico ¹	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio--VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1 6}	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1 4}	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA -- ISO 17025	1461.01	AIHA-LAP, LLC EMLAP	100789
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Canada	1461.01	USDA	P330-15-00234
EPA--Crypto	TN00003		


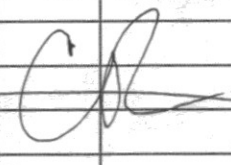
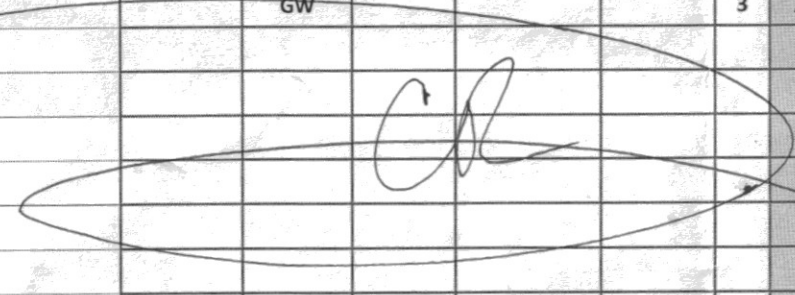
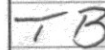
¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

Company Name/Address: Arcadis - Chevron - NM				Billing Information: Accounts Payable 1004 N Big Spring Street Suite 121 Midland, TX 79701				Analysis / Container / Preservative				Chain of Custody Page <u>1</u> of <u>1</u>	
1004 N Big Spring Street Suite 121 Midland, TX 79701				Email To: william.foord@arcadis.com;douglas.jordan@arc				Pres Chk				 MT JULIET, TN 12065 Lebanon Rd Mount Juliet, TN 37122 Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf	
Report to: Scott Foord													
Project Description: NM F- State Tank Battery				City/State Collected:				Please Circle: PT MT CT ET				SDG # <u>11469352</u> H206 Tabl	
Phone: 432-687-5400				Client Project # 30123982 ? 00003				Lab Project # CHEVARCNM-NMFSTATE					
Collected by (print): <i>Cory Rodriguez</i>				Site/Facility ID # NM F-STATE				P.O. #				Acctnum: CHEVARCNM Template: T182339 Prelogin: P910035 PM: 526 - Chris McCord PB:	
Collected by (signature): <i>Cory Rodriguez</i>				Rush? (Lab MUST Be Notified) <input type="checkbox"/> Same Day <input type="checkbox"/> Five Day <input type="checkbox"/> Next Day <input type="checkbox"/> 5 Day (Rad Only) <input type="checkbox"/> Two Day <input type="checkbox"/> 10 Day (Rad Only) <input type="checkbox"/> Three Day				Quote #					
Immediately Packed on Ice N <u>Y</u> <u>X</u>				Date Results Needed				No. of Cntrs				Shipped Via: FedEX Priority Remarks Sample # (lab only)	
Sample ID				Comp/Grab		Matrix *		Depth		Date			
WW4 - NM F- State Battery				GW		—		3-8-22		1154		3	
				GW								3	
				GW								3	
													
* Matrix: SS - Soil AIR - Air F - Filter GW - Groundwater B - Bioassay WW - WasteWater DW - Drinking Water OT - Other				Remarks: Samples returned via: <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Courier				Tracking #				pH _____ Temp _____ Flow _____ Other _____	
Relinquished by: (Signature) <i>Cory Rodriguez</i>				Date: 3-8-22		Time: 1710		Received by: (Signature) 				Trip Blank Received: <input checked="" type="checkbox"/> Yes/ No HCL / MeOH TBR	
Relinquished by: (Signature) 				Date: 3-8-22		Time: 17:30		Received by: (Signature) <i>SWA</i>				Temp: 17.7 °C Bottles Received: 3	
Relinquished by: (Signature)				Date:		Time:		Received for lab by: (Signature) <i>Olinia</i>				Date: 3/9/22 Time: 1300 Hold:	
												Condition: NCF / OK	

Company Name/Address: Arcadis - Chevron - NM 1004 N Big Spring Street Suite 121 Midland, TX 79701				Billing Information: Accounts Payable 1004 N Big Spring Street Suite 121 Midland, TX 79701				Analysis / Container / Preservative				Chain of Custody Page 1 of 1			
Report to: Scott Foord				Email To: william.foord@arcadis.com;douglas.jordan@arc				<div style="text-align: center;">  MT JULIET, TN 12065 Lebanon Rd Mount Juliet, TN 37122 Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf SDG # 11469352 H206 Acctnum: CHEVARCNM Template: T182339 Prelogin: P910035 PM: 526 - Chris McCord PB: Shipped Via: FedEX Priority </div>				Pres Chk			
Project Description: NM F- State Tank Battery		City/State Collected:		Please Circle: PT MT CT ET											
Phone: 432-687-5400		Client Project # 30123982 ? 00003		Lab Project # CHEVARCNM-NMFSTATE											
Collected by (print): Cory Rodriguez		Site/Facility ID # NM F-STATE		P.O. #											
Collected by (signature): Cory Rodriguez		Rush? (Lab MUST Be Notified) <input type="checkbox"/> Same Day <input type="checkbox"/> Five Day <input type="checkbox"/> Next Day <input type="checkbox"/> 5 Day (Rad Only) <input type="checkbox"/> Two Day <input type="checkbox"/> 10 Day (Rad Only) <input type="checkbox"/> Three Day		Quote #											
Immediately Packed on Ice N <input checked="" type="checkbox"/> Y <input type="checkbox"/>		Date Results Needed		No. of Cntrs											
Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	BTEX 40ml/Amb-HCI		CHLORIDE (300.0) 125mlHDPE-NoPres							
MW-6-W-220308		GW	—	3-8-22	1154	3	X	X							
MW-6-W-220308		GW				3	X	X							
		GW				3	X	X							
															
															
															
* Matrix: SS - Soil AIR - Air F - Filter GW - Groundwater B - Bioassay WW - WasteWater DW - Drinking Water OT - Other				Remarks:				pH _____ Temp _____ Flow _____ Other _____				Sample Receipt Checklist COC Seal Present/Intact: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N COC Signed/Accurate: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Bottles arrive intact: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Correct bottles used: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Sufficient volume sent: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N If Applicable VOA Zero Headspace: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Preservation Correct/Checked: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N RAD Screen <0.5 mR/hr: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N			
Samples returned via: <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Courier				Tracking #				Trip Blank Received: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No HCL / MeOH TBR							
Relinquished by: (Signature) Cory Rodriguez		Date: 3-8-22		Time: 1710		Received by: (Signature) [Signature]		Temp: 17.7 °C		Bottles Received: 3		If preservation required by Login: Date/Time			
Relinquished by: (Signature) [Signature]		Date: 3-8-22		Time: 17:30		Received by: (Signature) [Signature]		Date: 3/8/22		Time: 1300		Hold:			
Relinquished by: (Signature)		Date:		Time:		Received for lab by: (Signature) Olinia		Date: 3/8/22		Time: 1300		Condition: NCF / OK			

Chris McCord

From: Jordan, Morgan <Douglas.Jordan@arcadis.com>
Sent: Friday, March 11, 2022 7:59 AM
To: Chris McCord; Foord, Scott; EnvironmentDM-India; DeMarco, Andrew
Cc: Rodriquez, Cory
Subject: RE: Pace Analytical National Login for 30123982-0003 NM F- State Tank Battery L1469352
Attachments: In01L1469352.pdf; COCL1469352 (003).pdf

CAUTION: This email originated from outside Pace Analytical. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Chris, can you please update the sample ID for us to correct Chevron labeling: MW-6-W-220308. Also edit on attached COC.

Can you add Andrew DeMarco to final report as well please.

Thank You,

Morgan Jordan | AFS | Environmental Scientist | douglas.jordan@arcadis.com | Arcadis | Arcadis U.S., Inc.
98 San Jacinto Blvd, Suite 414 | Austin, TX | 78701 | USA M. +1 281 644 9437

Connect with us! www.arcadis.com | LinkedIn | Twitter | Facebook

Be green, leave it on the screen.

-----Original Message-----

From: Chris McCord <chris.mccord@pacelabs.com>
Sent: Thursday, March 10, 2022 9:19 PM
To: Foord, Scott <William.Foord@arcadis.com>; Jordan, Morgan <Douglas.Jordan@arcadis.com>; EnvironmentDM-India <environmentDM-India@arcadis.com>
Subject: Pace Analytical National Login for 30123982-0003 NM F- State Tank Battery L1469352

"Privileged and Confidential"

Thank you for choosing Pace National! Please find enclosed PDF files containing your laboratory login confirmation and chain of custody.

Pace National is leading the laboratory industry with our On-line Data Management tools. Please contact your Project Manager to learn how to create historical Excel tables or access data in real time using powerful and intuitive software that is only available at <https://nam02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.pacenational.com%2F&data=04%7C01%7Cdouglas.jordan%40arcadis.com%7Cec7246c5f1774a28f72d08da030de1e6%7C7f90057d3ea046feb07ce0568627081b%7C0%7C0%7C637825655546575132%7CUnknown%7CTWFPbGZsb3d8eyJWljoimC4wLjAwMDAiLCJQIjoiV2luMzliLCJBTiI6Ikh1aWwiLCJXVCi6Mn0%3D%7C3000&data=UqVFcAd8yNBxrtIB3PYA1%2BhQ%2B%2FFk4eH%2BWWxIRKwMyXQ%3D&reserved=0>.

Visit Pace National's secure data management web site - myData - for all your reporting and data management needs at <https://nam02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.pacenational.com%2Flogin&data=04%7C01%7Cdouglas.jordan%40arcadis.com%7Cec7246c5f1774a28f72d08da030de1e6%7C7f90057d3ea046feb07ce0568627081b%7C0%7C0%7C637825655546575132%7CUnknown%7CTWFPbGZsb3d8eyJWljoimC4wLjAwMDAiLCJQIjoiV2luMzliLCJBTiI6Ikh1aWwiLCJXVCi6Mn0%3D%7C3000&data=UqVFcAd8yNBxrtIB3PYA1%2BhQ%2B%2FFk4eH%2BWWxIRKwMyXQ%3D&reserved=0>.



ANALYTICAL REPORT

July 08, 2022

Arcadis - Chevron - TX

Sample Delivery Group: L1502820
Samples Received: 06/09/2022
Project Number: 30049835.0002B
Description: NM F- State Tank Battery
Site: NM F-STATE
Report To: Morgan Jordan
10205 Westheimer Road
Suite 800
Houston, TX 77042

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Entire Report Reviewed By:

Chris McCord
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

Cp: Cover Page	1	<div><div>1</div>Cp</div>
Tc: Table of Contents	2	
Ss: Sample Summary	3	<div><div>2</div>Tc</div>
Cn: Case Narrative	4	
Sr: Sample Results	5	<div><div>3</div>Ss</div>
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MW-3-W-220608 L1502820-02	6	<div><div>4</div>Cn</div>
MW-8-W-220608 L1502820-03	7	<div><div>5</div>Sr</div>
MW-4-W-220608 L1502820-04	8	
MW-5-W-220608 L1502820-05	9	<div><div>6</div>Qc</div>
MW-7-W-220608 L1502820-06	10	
MW-9R-W-220608 L1502820-07	11	<div><div>7</div>Gl</div>
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MW-6-W-220608 L1502820-01 GW

Collected by Cory Rodriguez
Collected date/time 06/08/22 09:07
Received date/time 06/09/22 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 300.0	WG1889145	1	07/02/22 16:47	07/02/22 16:47	LBR	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8021B	WG1877680	1	06/10/22 16:40	06/10/22 16:40	DWR	Mt. Juliet, TN

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

MW-3-W-220608 L1502820-02 GW

Collected by Cory Rodriguez
Collected date/time 06/08/22 09:33
Received date/time 06/09/22 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 300.0	WG1889145	1	07/02/22 16:59	07/02/22 16:59	LBR	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8021B	WG1877680	1	06/10/22 17:02	06/10/22 17:02	DWR	Mt. Juliet, TN

MW-8-W-220608 L1502820-03 GW

Collected by Cory Rodriguez
Collected date/time 06/08/22 09:53
Received date/time 06/09/22 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 300.0	WG1889145	1	07/02/22 17:12	07/02/22 17:12	LBR	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8021B	WG1877680	1	06/10/22 17:23	06/10/22 17:23	DWR	Mt. Juliet, TN

MW-4-W-220608 L1502820-04 GW

Collected by Cory Rodriguez
Collected date/time 06/08/22 10:12
Received date/time 06/09/22 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 300.0	WG1889145	1	07/02/22 17:24	07/02/22 17:24	LBR	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8021B	WG1877680	1	06/10/22 17:45	06/10/22 17:45	DWR	Mt. Juliet, TN

MW-5-W-220608 L1502820-05 GW

Collected by Cory Rodriguez
Collected date/time 06/08/22 10:50
Received date/time 06/09/22 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 300.0	WG1889145	1	07/02/22 17:36	07/02/22 17:36	LBR	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8021B	WG1877680	1	06/10/22 18:06	06/10/22 18:06	DWR	Mt. Juliet, TN

MW-7-W-220608 L1502820-06 GW

Collected by Cory Rodriguez
Collected date/time 06/08/22 12:50
Received date/time 06/09/22 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 300.0	WG1889145	1	07/02/22 17:49	07/02/22 17:49	LBR	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8021B	WG1877680	1	06/10/22 18:28	06/10/22 18:28	DWR	Mt. Juliet, TN

MW-9R-W-220608 L1502820-07 GW

Collected by Cory Rodriguez
Collected date/time 06/08/22 13:10
Received date/time 06/09/22 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 300.0	WG1889145	1	07/02/22 18:51	07/02/22 18:51	LBR	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8021B	WG1877680	1	06/10/22 18:49	06/10/22 18:49	DWR	Mt. Juliet, TN

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Chris McCord
Project Manager

- ¹ Cp
- ² Tc
- ³ Ss
- ⁴ Cn
- ⁵ Sr
- ⁶ Qc
- ⁷ Gl
- ⁸ Al
- ⁹ Sc

MW-6-W-220808

Collected date/time: 06/08/22 09:07

L1502820

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Chloride	68.4		0.379	1.00	1	07/02/2022 16:47	WG1889145

Volatile Organic Compounds (GC) by Method 8021B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Benzene	U		0.000190	0.000500	1	06/10/2022 16:40	WG1877680
Toluene	U		0.000412	0.00100	1	06/10/2022 16:40	WG1877680
Ethylbenzene	U		0.000160	0.000500	1	06/10/2022 16:40	WG1877680
m&p-Xylenes	U		0.000310	0.00100	1	06/10/2022 16:40	WG1877680
o-Xylene	U		0.000200	0.000500	1	06/10/2022 16:40	WG1877680
Total Xylene	U		0.000510	0.00150	1	06/10/2022 16:40	WG1877680
Total BTEX	U		0.000160	0.000500	1	06/10/2022 16:40	WG1877680
(S) a,a,a-Trifluorotoluene(PID)	103			79.0-125		06/10/2022 16:40	WG1877680

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Collected date/time: 06/08/22 09:33

L1502820

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Chloride	74.6		0.379	1.00	1	07/02/2022 16:59	WG1889145

Volatile Organic Compounds (GC) by Method 8021B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Benzene	U		0.000190	0.000500	1	06/10/2022 17:02	WG1877680
Toluene	U		0.000412	0.00100	1	06/10/2022 17:02	WG1877680
Ethylbenzene	U		0.000160	0.000500	1	06/10/2022 17:02	WG1877680
m&p-Xylenes	U		0.000310	0.00100	1	06/10/2022 17:02	WG1877680
o-Xylene	U		0.000200	0.000500	1	06/10/2022 17:02	WG1877680
Total Xylene	U		0.000510	0.00150	1	06/10/2022 17:02	WG1877680
Total BTEX	U		0.000160	0.000500	1	06/10/2022 17:02	WG1877680
(S) a,a,a-Trifluorotoluene(PID)	102			79.0-125		06/10/2022 17:02	WG1877680

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Collected date/time: 06/08/22 09:53

L1502820

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Chloride	51.6		0.379	1.00	1	07/02/2022 17:12	WG1889145

Volatile Organic Compounds (GC) by Method 8021B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Benzene	U		0.000190	0.000500	1	06/10/2022 17:23	WG1877680
Toluene	U		0.000412	0.00100	1	06/10/2022 17:23	WG1877680
Ethylbenzene	U		0.000160	0.000500	1	06/10/2022 17:23	WG1877680
m&p-Xylenes	U		0.000310	0.00100	1	06/10/2022 17:23	WG1877680
o-Xylene	U		0.000200	0.000500	1	06/10/2022 17:23	WG1877680
Total Xylene	U		0.000510	0.00150	1	06/10/2022 17:23	WG1877680
Total BTEX	U		0.000160	0.000500	1	06/10/2022 17:23	WG1877680
(S) a,a,a-Trifluorotoluene(PID)	103			79.0-125		06/10/2022 17:23	WG1877680

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

MW-4-W-220808
Collected date/time: 06/08/22 10:12

L1502820

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Chloride	84.8		0.379	1.00	1	07/02/2022 17:24	WG1889145

Volatile Organic Compounds (GC) by Method 8021B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Benzene	U		0.000190	0.000500	1	06/10/2022 17:45	WG1877680
Toluene	U		0.000412	0.00100	1	06/10/2022 17:45	WG1877680
Ethylbenzene	U		0.000160	0.000500	1	06/10/2022 17:45	WG1877680
m&p-Xylenes	U		0.000310	0.00100	1	06/10/2022 17:45	WG1877680
o-Xylene	U		0.000200	0.000500	1	06/10/2022 17:45	WG1877680
Total Xylene	U		0.000510	0.00150	1	06/10/2022 17:45	WG1877680
Total BTEX	U		0.000160	0.000500	1	06/10/2022 17:45	WG1877680
(S) a,a,a-Trifluorotoluene(PID)	102			79.0-125		06/10/2022 17:45	WG1877680

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Collected date/time: 06/08/22 10:50

L1502820

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Chloride	73.5		0.379	1.00	1	07/02/2022 17:36	WG1889145

Volatile Organic Compounds (GC) by Method 8021B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Benzene	U		0.000190	0.000500	1	06/10/2022 18:06	WG1877680
Toluene	U		0.000412	0.00100	1	06/10/2022 18:06	WG1877680
Ethylbenzene	U		0.000160	0.000500	1	06/10/2022 18:06	WG1877680
m&p-Xylenes	U		0.000310	0.00100	1	06/10/2022 18:06	WG1877680
o-Xylene	U		0.000200	0.000500	1	06/10/2022 18:06	WG1877680
Total Xylene	U		0.000510	0.00150	1	06/10/2022 18:06	WG1877680
Total BTEX	U		0.000160	0.000500	1	06/10/2022 18:06	WG1877680
(S) a,a,a-Trifluorotoluene(PID)	102			79.0-125		06/10/2022 18:06	WG1877680

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

MMW-7-W-220606
Collected date/time: 06/08/22 12:50

L1502820

Wet Chemistry by Method 300.0

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	62.5		0.379	1.00	1	07/02/2022 17:49	WG1889145

Volatile Organic Compounds (GC) by Method 8021B

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	U		0.000190	0.000500	1	06/10/2022 18:28	WG1877680
Toluene	U		0.000412	0.00100	1	06/10/2022 18:28	WG1877680
Ethylbenzene	U		0.000160	0.000500	1	06/10/2022 18:28	WG1877680
m&p-Xylenes	U		0.000310	0.00100	1	06/10/2022 18:28	WG1877680
o-Xylene	U		0.000200	0.000500	1	06/10/2022 18:28	WG1877680
Total Xylene	U		0.000510	0.00150	1	06/10/2022 18:28	WG1877680
Total BTEX	U		0.000160	0.000500	1	06/10/2022 18:28	WG1877680
(S) a,a,a-Trifluorotoluene(PID)	103			79.0-125		06/10/2022 18:28	WG1877680

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Chloride	104		0.379	1.00	1	07/02/2022 18:51	WG1889145

Volatile Organic Compounds (GC) by Method 8021B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Benzene	U		0.000190	0.000500	1	06/10/2022 18:49	WG1877680
Toluene	U		0.000412	0.00100	1	06/10/2022 18:49	WG1877680
Ethylbenzene	U		0.000160	0.000500	1	06/10/2022 18:49	WG1877680
m&p-Xylenes	U		0.000310	0.00100	1	06/10/2022 18:49	WG1877680
o-Xylene	U		0.000200	0.000500	1	06/10/2022 18:49	WG1877680
Total Xylene	U		0.000510	0.00150	1	06/10/2022 18:49	WG1877680
Total BTEX	U		0.000160	0.000500	1	06/10/2022 18:49	WG1877680
(S) a,a,a-Trifluorotoluene(PID)	102			79.0-125		06/10/2022 18:49	WG1877680

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Wet Chemistry by Method 300.0

[L1502820-01,02,03,04,05,06,07](#)

Method Blank (MB)

(MB) R3811240-1 07/02/22 09:59

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Chloride	U		0.379	1.00

L1511083-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1511083-01 07/02/22 14:30 • (DUP) R3811240-3 07/02/22 14:42

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Chloride	47.9	47.4	1	1.16		15

L1502820-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1502820-06 07/02/22 17:49 • (DUP) R3811240-6 07/02/22 18:01

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Chloride	62.5	62.5	1	0.0645		15

Laboratory Control Sample (LCS)

(LCS) R3811240-2 07/02/22 10:11

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/l	mg/l	%	%	
Chloride	40.0	40.4	101	80.0-120	

L1511083-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1511083-01 07/02/22 14:30 • (MS) R3811240-4 07/02/22 14:55 • (MSD) R3811240-5 07/02/22 15:07

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Chloride	50.0	47.9	96.8	96.3	97.8	96.9	1	80.0-120			0.482	15

L1502820-06 Original Sample (OS) • Matrix Spike (MS)

(OS) L1502820-06 07/02/22 17:49 • (MS) R3811240-7 07/02/22 18:39

	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Analyte	mg/l	mg/l	mg/l	%		%	
Chloride	50.0	62.5	111	96.8	1	80.0-120	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Volatile Organic Compounds (GC) by Method 8021B

[L1502820-01,02,03,04,05,06,07](#)

Method Blank (MB)

(MB) R3805005-3 06/10/22 15:24

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Benzene	U		0.000190	0.000500
Toluene	0.000493	U	0.000412	0.00100
Ethylbenzene	U		0.000160	0.000500
m&p-Xylenes	0.000512	U	0.000310	0.00100
o-Xylene	U		0.000200	0.000500
Total Xylene	0.000512	U	0.000510	0.00150
Total BTEX	U		0.000160	0.000500
(S) a,a,a-Trifluorotoluene(PID)	102			79.0-125

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Laboratory Control Sample (LCS)

(LCS) R3805005-1 06/10/22 13:50

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.0500	0.0499	99.8	77.0-122	
Toluene	0.0500	0.0467	93.4	80.0-121	
Ethylbenzene	0.0500	0.0474	94.8	80.0-123	
m&p-Xylenes	0.100	0.0908	90.8	70.0-130	
o-Xylene	0.0500	0.0520	104	70.0-130	
Total Xylene	0.150	0.143	95.3	47.0-154	
Total BTEX	0.300	0.287	95.7	47.0-154	
(S) a,a,a-Trifluorotoluene(PID)			102	79.0-125	

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier Description

J	The identification of the analyte is acceptable; the reported value is an estimate.
---	---

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey--NELAP	TN002
California	2932	New Mexico ¹	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio--VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1 6}	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1 4}	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA -- ISO 17025	1461.01	AIHA-LAP, LLC EMLAP	100789
A2LA -- ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA--Crypto	TN00003		

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

Released to Imaging: 8/2/2023 1:38:02 PM

6/9-NCF-L1502820 CHEVARCA

R5

Time estimate: oh

Time spent: oh

Members



Hailey Melson (responsible)



Christopher McCord

Due on 13 June 2022 8:00 AM for target Done

- ☐ Parameter(s) past holding time
- ☒ Temperature not in range
- ☐ Improper container type
- ☐ pH not in range
- ☐ Insufficient sample volume
- ☐ Sample is biphasic
- ☐ Vials received with headspace
- ☒ Broken container
- ☒ Sufficient sample remains
- ☐ If broken container: Insufficient packing material around container
- ☐ If broken container: Insufficient packing material inside cooler
- ☐ If broken container: Improper handling by carrier: _____
- ☐ If broken container: Sample was frozen
- ☐ If broken container: Container lid not intact
- ☐ Client informed by Call
- ☒ Client informed by Email
- ☐ Client informed by Voicemail
- ☒ Date/Time: 6/10/22 17:00
- ☒ PM initials: CM
- ☒ Client Contact: Scott foord

Comments

Hailey Melson

9 June 2022 11:05 AM

- 1) All Ice melted. Temp = 14.9
- 2) Received 1 vial broken for ID: MW-8-W-220608

Christopher McCord

10 June 2022 5:11 PM

1. Run as received.
2. Sufficient sample remains for one analysis.

Hailey Melson

10 June 2022 5:14 PM

Done

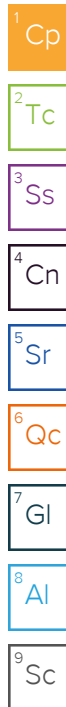


ANALYTICAL REPORT

August 26, 2022

Arcadis - Chevron - TX

Sample Delivery Group: L1525752
Samples Received: 08/16/2022
Project Number: 30123982 - 0003
Description: NM F State
Site: NM F-STATE
Report To: Morgan Jordan
10205 Westheimer Road
Suite 800
Houston, TX 77042



Entire Report Reviewed By:

Chris McCord
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

Cp: Cover Page	1	¹ Cp
Tc: Table of Contents	2	
Ss: Sample Summary	3	² Tc
Cn: Case Narrative	4	
Sr: Sample Results	5	³ Ss
MW-6-W-220815 L1525752-01	5	
Qc: Quality Control Summary	6	⁴ Cn
Wet Chemistry by Method 300.0	6	⁵ Sr
Volatile Organic Compounds (GC) by Method 8021B	7	
Gl: Glossary of Terms	8	⁶ Qc
Al: Accreditations & Locations	9	⁷ Gl
Sc: Sample Chain of Custody	10	⁸ Al
		⁹ Sc

SAMPLE SUMMARY

MW-6-W-220815 L1525752-01 GW

Collected by Daniel McGee
Collected date/time 08/15/22 09:30
Received date/time 08/16/22 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 300.0	WG1912355	1	08/17/22 21:47	08/17/22 21:47	LBR	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8021B	WG1914370	1	08/22/22 07:44	08/22/22 07:44	ACG	Mt. Juliet, TN

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Chris McCord
Project Manager

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

MW-6-W-220815
Collected date/time: 08/15/22 09:30

L1525752

Wet Chemistry by Method 300.0

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	75.6		0.379	1.00	1	08/17/2022 21:47	WG1912355

Volatile Organic Compounds (GC) by Method 8021B

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	U		0.000190	0.000500	1	08/22/2022 07:44	WG1914370
Toluene	U		0.000412	0.00100	1	08/22/2022 07:44	WG1914370
Ethylbenzene	U		0.000160	0.000500	1	08/22/2022 07:44	WG1914370
m&p-Xylenes	U		0.000310	0.00100	1	08/22/2022 07:44	WG1914370
o-Xylene	U		0.000200	0.000500	1	08/22/2022 07:44	WG1914370
Total Xylene	U		0.000510	0.00150	1	08/22/2022 07:44	WG1914370
Total BTEX	U		0.000160	0.000500	1	08/22/2022 07:44	WG1914370
(S) a,a,a-Trifluorotoluene(PID)	98.3			79.0-125		08/22/2022 07:44	WG1914370

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Wet Chemistry by Method 300.0

L1525752-01

Method Blank (MB)

(MB) R3827943-1 08/17/22 21:22

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Chloride	U		0.379	1.00

L1525752-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1525752-01 08/17/22 21:47 • (DUP) R3827943-3 08/17/22 22:00

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	75.6	75.4	1	0.336		15

L1526158-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1526158-04 08/18/22 03:24 • (DUP) R3827943-6 08/18/22 03:36

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	21.6	21.4	1	0.608		15

Laboratory Control Sample (LCS)

(LCS) R3827943-2 08/17/22 21:35

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40.0	41.8	105	80.0-120	

L1526028-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1526028-01 08/17/22 22:37 • (MS) R3827943-4 08/17/22 22:50 • (MSD) R3827943-5 08/17/22 23:02

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	50.0	74.5	123	124	97.3	99.1	1	80.0-120			0.739	15

L1526158-04 Original Sample (OS) • Matrix Spike (MS)

(OS) L1526158-04 08/18/22 03:24 • (MS) R3827943-7 08/18/22 03:49

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	50.0	21.6	72.4	102	1	80.0-120	

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Volatile Organic Compounds (GC) by Method 8021B

[L1525752-01](#)

Method Blank (MB)

(MB) R3829189-3 08/22/22 04:50

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Benzene	U		0.000190	0.000500
Toluene	U		0.000412	0.00100
Ethylbenzene	U		0.000160	0.000500
m&p-Xylenes	U		0.000310	0.00100
o-Xylene	U		0.000200	0.000500
Total Xylene	U		0.000510	0.00150
Total BTEX	U		0.000160	0.000500
(S) a,a,a-Trifluorotoluene(PID)	98.0			79.0-125

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

Laboratory Control Sample (LCS)

(LCS) R3829189-1 08/22/22 03:34

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.0500	0.0448	89.6	77.0-122	
Toluene	0.0500	0.0437	87.4	80.0-121	
Ethylbenzene	0.0500	0.0451	90.2	80.0-123	
m&p-Xylenes	0.100	0.0876	87.6	70.0-130	
o-Xylene	0.0500	0.0436	87.2	70.0-130	
Total Xylene	0.150	0.131	87.3	47.0-154	
Total BTEX	0.300	0.265	88.3	47.0-154	
(S) a,a,a-Trifluorotoluene(PID)			97.5	79.0-125	

⁷ Gl

⁸ Al

⁹ Sc

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RDL	Reported Detection Limit.
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RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
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Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
-----------	-------------

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey--NELAP	TN002
California	2932	New Mexico ¹	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio--VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1 6}	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1 4}	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA -- ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA -- ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA--Crypto	TN00003		

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
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¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

[illegible]

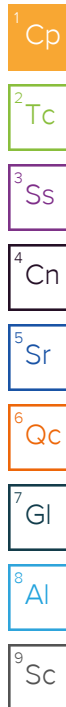


ANALYTICAL REPORT

December 02, 2022

Arcadis - Chevron - TX

Sample Delivery Group: L1559964
Samples Received: 11/19/2022
Project Number: 30123982 - 0003
Description: NM F State
Site: NM F-STATE
Report To: Morgan Jordan
10205 Westheimer Road
Suite 800
Houston, TX 77042



Entire Report Reviewed By:

A handwritten signature in blue ink, appearing to read "Chris McCord".

Chris McCord
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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MW-6-W-221118 L1559964-01 GW

Collected by Cory Rodriguez
Collected date/time 11/18/22 09:22
Received date/time 11/19/22 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 300.0	WG1965325	1	11/28/22 08:51	11/28/22 08:51	GEB	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8021B	WG1963844	1	11/22/22 21:31	11/22/22 21:31	BAM	Mt. Juliet, TN

¹Cp

²Tc

³Ss

MW-5-W-221118 L1559964-02 GW

Collected by Cory Rodriguez
Collected date/time 11/18/22 09:47
Received date/time 11/19/22 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 300.0	WG1965842	1	11/28/22 16:54	11/28/22 16:54	LBR	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8021B	WG1963844	1	11/22/22 21:53	11/22/22 21:53	BAM	Mt. Juliet, TN

⁴Cn

⁵Sr

⁶Qc

MW-9R-W-221118 L1559964-03 GW

Collected by Cory Rodriguez
Collected date/time 11/18/22 09:58
Received date/time 11/19/22 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 300.0	WG1965842	1	11/28/22 18:06	11/28/22 18:06	LBR	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8021B	WG1963844	1	11/22/22 22:15	11/22/22 22:15	BAM	Mt. Juliet, TN

⁷Gl

⁸Al

⁹Sc

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Chris McCord
Project Manager

- ¹ Cp
- ² Tc
- ³ Ss
- ⁴ Cn
- ⁵ Sr
- ⁶ Qc
- ⁷ Gl
- ⁸ Al
- ⁹ Sc

Collected date/time: 11/18/22 09:22

L1559964

Wet Chemistry by Method 300.0

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	73.8		0.379	1.00	1	11/28/2022 08:51	WG1965325

Volatile Organic Compounds (GC) by Method 8021B

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	U		0.000190	0.000500	1	11/22/2022 21:31	WG1963844
Toluene	U		0.000412	0.00100	1	11/22/2022 21:31	WG1963844
Ethylbenzene	0.000286	B J	0.000160	0.000500	1	11/22/2022 21:31	WG1963844
m&p-Xylenes	U		0.000310	0.00100	1	11/22/2022 21:31	WG1963844
o-Xylene	U		0.000200	0.000500	1	11/22/2022 21:31	WG1963844
Total Xylene	U		0.000510	0.00150	1	11/22/2022 21:31	WG1963844
Total BTEX	0.000286	J	0.000160	0.000500	1	11/22/2022 21:31	WG1963844
(S) a,a,a-Trifluorotoluene(PID)	111			79.0-125		11/22/2022 21:31	WG1963844

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

MW-5-W-221118

Collected date/time: 11/18/22 09:47

L1559964

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Chloride	80.4		0.379	1.00	1	11/28/2022 16:54	WG1965842

Volatile Organic Compounds (GC) by Method 8021B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Benzene	U		0.000190	0.000500	1	11/22/2022 21:53	WG1963844
Toluene	U		0.000412	0.00100	1	11/22/2022 21:53	WG1963844
Ethylbenzene	0.000287	B J	0.000160	0.000500	1	11/22/2022 21:53	WG1963844
m&p-Xylenes	U		0.000310	0.00100	1	11/22/2022 21:53	WG1963844
o-Xylene	U		0.000200	0.000500	1	11/22/2022 21:53	WG1963844
Total Xylene	U		0.000510	0.00150	1	11/22/2022 21:53	WG1963844
Total BTEX	0.000287	J	0.000160	0.000500	1	11/22/2022 21:53	WG1963844
(S) a,a,a-Trifluorotoluene(PID)	112			79.0-125		11/22/2022 21:53	WG1963844

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Collected date/time: 11/18/22 09:58

L1559964

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Chloride	97.0		0.379	1.00	1	11/28/2022 18:06	WG1965842

Volatile Organic Compounds (GC) by Method 8021B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Benzene	U		0.000190	0.000500	1	11/22/2022 22:15	WG1963844
Toluene	U		0.000412	0.00100	1	11/22/2022 22:15	WG1963844
Ethylbenzene	0.000288	B J	0.000160	0.000500	1	11/22/2022 22:15	WG1963844
m&p-Xylenes	U		0.000310	0.00100	1	11/22/2022 22:15	WG1963844
o-Xylene	U		0.000200	0.000500	1	11/22/2022 22:15	WG1963844
Total Xylene	U		0.000510	0.00150	1	11/22/2022 22:15	WG1963844
Total BTEX	0.000288	J	0.000160	0.000500	1	11/22/2022 22:15	WG1963844
(S) a,a,a-Trifluorotoluene(PID)	111			79.0-125		11/22/2022 22:15	WG1963844

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3865497-1 11/28/22 02:40				
	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Chloride	U		0.379	1.00

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

L1559951-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1559951-06 11/28/22 04:16 • (DUP) R3865497-3 11/28/22 04:30						
	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Chloride	139	133	1	3.94		15

L1559964-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1559964-01 11/28/22 08:51 • (DUP) R3865497-5 11/28/22 09:04						
	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Chloride	73.8	72.7	1	1.53		15

Laboratory Control Sample (LCS)

(LCS) R3865497-2 11/28/22 02:54					
	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/l	mg/l	%	%	
Chloride	40.0	40.4	101	80.0-120	

L1559951-06 Original Sample (OS) • Matrix Spike (MS)

(OS) L1559951-06 11/28/22 04:16 • (MS) R3865497-4 11/28/22 04:44							
	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Analyte	mg/l	mg/l	mg/l	%		%	
Chloride	50.0	139	176	73.9	1	80.0-120	J6

L1559964-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1559964-01 11/28/22 08:51 • (MS) R3865497-6 11/28/22 09:18 • (MSD) R3865497-7 11/28/22 09:32												
	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Chloride	50.0	73.8	118	118	88.7	88.9	1	80.0-120			0.0889	15

Method Blank (MB)

(MB) R3866013-1 11/28/22 13:43

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Chloride	U		0.379	1.00

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

L1559964-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1559964-02 11/28/22 16:54 • (DUP) R3866013-3 11/28/22 17:12

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Chloride	80.4	79.3	1	1.50		15

L1560581-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1560581-01 11/28/22 20:47 • (DUP) R3866013-6 11/28/22 21:05

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Chloride	34.5	34.6	1	0.418		15

Laboratory Control Sample (LCS)

(LCS) R3866013-2 11/28/22 14:01

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/l	mg/l	%	%	
Chloride	40.0	41.6	104	80.0-120	

L1559964-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1559964-02 11/28/22 16:54 • (MS) R3866013-4 11/28/22 17:30 • (MSD) R3866013-5 11/28/22 17:48

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Chloride	50.0	80.4	127	125	92.1	88.2	1	80.0-120			1.57	15

L1560581-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1560581-01 11/28/22 20:47 • (MS) R3866013-7 11/28/22 21:23

	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Analyte	mg/l	mg/l	mg/l	%		%	
Chloride	50.0	34.5	82.2	95.4	1	80.0-120	

Method Blank (MB)

(MB) R3865137-3 11/22/22 14:57

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Benzene	U		0.000190	0.000500
Toluene	0.000686	U	0.000412	0.00100
Ethylbenzene	0.000323	U	0.000160	0.000500
m&p-Xylenes	U		0.000310	0.00100
o-Xylene	U		0.000200	0.000500
Total Xylene	U		0.000510	0.00150
Total BTEX	U		0.000160	0.000500
(S) a,a,a-Trifluorotoluene(PID)	111			79.0-125

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

Laboratory Control Sample (LCS)

(LCS) R3865137-1 11/22/22 12:10

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.0500	0.0547	109	77.0-122	
Toluene	0.0500	0.0486	97.2	80.0-121	
Ethylbenzene	0.0500	0.0558	112	80.0-123	
m&p-Xylenes	0.100	0.0996	99.6	70.0-130	
o-Xylene	0.0500	0.0520	104	70.0-130	
Total Xylene	0.150	0.152	101	47.0-154	
Total BTEX	0.300	0.311	104	47.0-154	
(S) a,a,a-Trifluorotoluene(PID)			110	79.0-125	

⁷Gl

⁸Al

⁹Sc

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
B	The same analyte is found in the associated blank.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey--NELAP	TN002
California	2932	New Mexico ¹	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio--VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1 6}	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1 4}	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA -- ISO 17025	1461.01	AIHA-LAP, LLC EMLAP	100789
A2LA -- ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA--Crypto	TN00003		

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

Released to Imaging: 8/2/2023 1:38:02 PM

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Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 217341

CONDITIONS

Operator: CHEVRON U S A INC 6301 Deauville Blvd Midland, TX 79706	OGRID: 4323
	Action Number: 217341
	Action Type: [UF-GWA] Ground Water Abatement (GROUND WATER ABATEMENT)

CONDITIONS

Created By	Condition	Condition Date
michael.buchanan	Review of the 2022 Annual Groundwater Report for F State Tank Battery submitted on behalf of Chevron: Content Satisfactory 1. Request to reduce LNAPL Recovery and Gauging is granted for one (1) year to allow conditions at the site to equilibrate. 2. Monitoring wells: MW3, MW-4, MW-5, MW-7, MW-8, MW-9R, WW-1, and WW-2 may be reduced from sampling events. 3. Continue all other monitoring activities for the site 4. Submit the 2023 Annual Groundwater monitoring report by April 1, 2024.	8/2/2023